# THE MODERN HOSPITAL

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# THE HENRY FORD HOSPITAL IN TIME OF WAR: U. S. ARMY GENERAL HOSPITAL No. 36


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*In October, 1918, this huge million dollar hospital was turned over to the Government for use as a U. S. Army General Hospital, at a rental of one dollar per year. Much work had to be done in assembling and placing equipment, and making the alterations necessary to fit the plant for army purposes. How the entire hospital was prepared for occupancy by the army, with all departments coordinated under one commanding officer is described in this article. Over two thousand patients were cared for from November, 1918, to August, 1919. The great undertaking was carried out successfully, and every sick and wounded soldier was given the best physical and mental care.*

DESPITE the strictly military atmosphere, U. S. Army General Hospital No. 36 never outgrew its maiden name, Henry Ford Hospital. Known to Detroiters, in fact, throughout the country, by the name of the man who built it and then rented it to the Government at a time when demand for hospital room was at high tide, the public could not accustom itself to recognizing this post as an army institution. Its size, its beautiful architecture, and its surroundings made it known as "the million dollar hospital." In contrast the rental of $1.00 a year was but a mere formality. From outer extremity to outer extremity the main building measured the same as the national capitol in Washington, 750 feet.

The entire hospital and grounds were approximately twenty acres in extent. The buildings may be enumerated as the main building, the surgical building, which was called by the Ford authorities "private patient building," the operating pavilion, the laboratory building, the service building, the power house, and the garage.

All of these buildings, with the exception of the main building, were built prior to 1915. In 1917, however, the main building, intended to provide 500 single rooms with bath and toilet, was begun. The plans were decided upon after several months of study by the Ford Hospital authorities. However, the army desired that the wards should not be completed as private rooms in the main building, except in the east wing, which was used as nurses' quarters, isolation wards, and officers' wards. All of these buildings were connected by underground tunnels.

The lease renting the entire hospital buildings and grounds was drawn up and signed on October 5, 1918, Mr. Ford leasing the hospital to the Government for the sum of $1.00 per year, the lease to be renewable yearly during the period of the war at the option of the Government and not to run for more than thirty years, or more than eighteen months after declaration of peace between the United States and Germany.

The main building of the hospital, on the arrival of the commanding officer, was far from completion. Scarcity of labor and difficulty of assembling material caused delay, and because

*Author's Note: Acknowledgment is hereby made to Fraser H. Hood, formerly First Lieutenant, Sanitary Corps, author of "History of U. S. Army General Hospital No. 36," and Harley C. Hines, formerly Second Lieutenant, Sanitary Corps, editor of "The Thirty-Six Review," and staff. Much of the data in the following article was taken verbatim from the above mentioned publications and acknowledgment is herewith made.

the other buildings on the ground were taxed to capacity to house the nurse corps, enlisted personnel, administration offices, and store equipment, which rapidly began to arrive, it was not possible to receive overseas patients before the last of February.

## Period of Adjustment

During the month of January the influenza epidemic compelled the authorities to improvise a ward in the corridor connecting the old hospital buildings. Notwithstanding over 150 admissions for influenza among the command, no deaths resulted among the officers, nurses, or enlisted men of the post. But while there were no overseas sick and wounded to care for, there was much work to be done in assembling and placing the equipment, supervising the alterations necessary to fit the plant for army purposes, organizing the several departments and getting them in readiness for the services awaiting to be rendered. The amount of alterations was by no means inconsiderable. To most of the officers recently entering the regular army from Civil life, the ideas of army hospitals were but dimly envisaged, and the methods of procedure were far from clear. So that the first three months after the hospital became a Government agency were a period of adjustment.

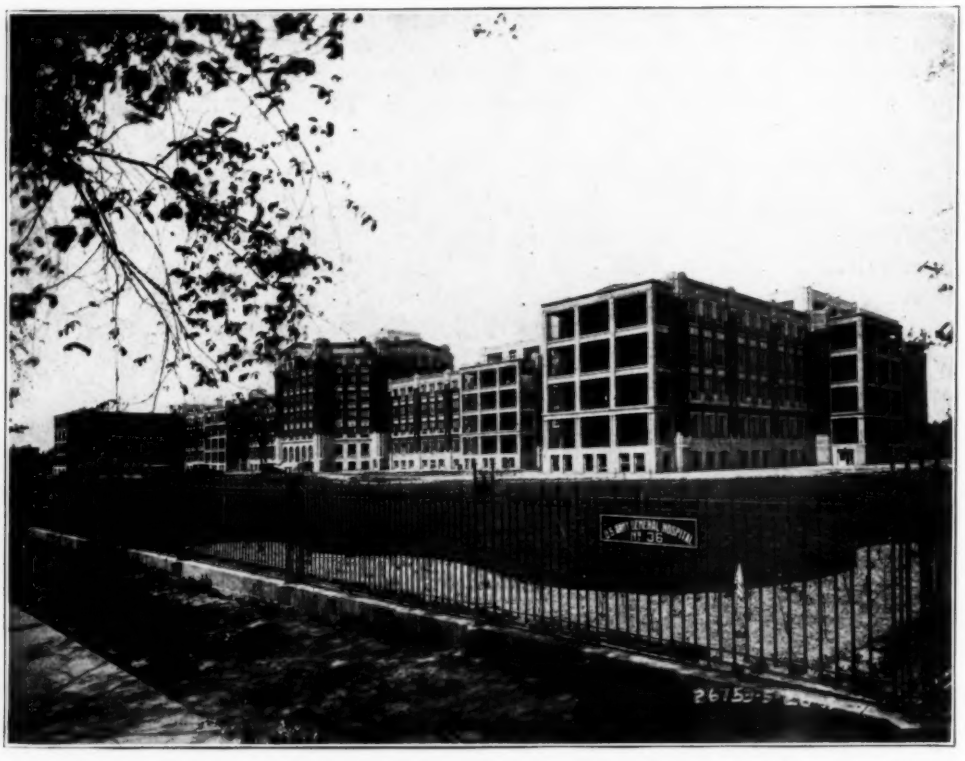
The registrar's office showed November 25, 1918, as the date the first patient was received in the hospital. The total number of admissions was 2,040.

The military organization of the hospital did not begin to assume form and substance until October 30, 1918, when a commanding officer was assigned to the hospital. After the commanding officer was assigned, there rapidly arrived an adjutant, quartermaster, medical supply officer, and other medical department personnel pertaining to the professional duties.

Administration offices were first established in the surgical building on the first floor. This building also housed for a time the members of the Army Nurse Corps, who lived on the third floor, and the second floor was used as a ward. The basement of the building was used, first as a storeroom, then as a post exchange, then as a guardhouse.

## Construction of Surgical Pavilion

It was, perhaps, in the construction of the surgical pavilion that the most care was expended by the Ford authorities. There were twelve operating rooms, all interconnecting, and each with a door opening into the main corridor. There was a double heating plant which obviated exigencies that would have arisen had there been but one heating plant and it had gone dead. The system of ventilation permitted the tight closing



A general view of the main building of Army General Hospital No. 36, Detroit, Mich., characterized as "one of the finest of the Army hospitals" by Surgeon General Ireland. This was formerly the Henry Ford Hospital, built by the automobile magnate.

of all doors and windows, and the heating arrangements were constructed with a view of varying the temperature and humidity of the air. The system of sterilization provided for sterilized cold water, as well as hot water, and the plumbing was chosen with a view to contributing all that was possible to the convenience of the operating surgeons and assistants.

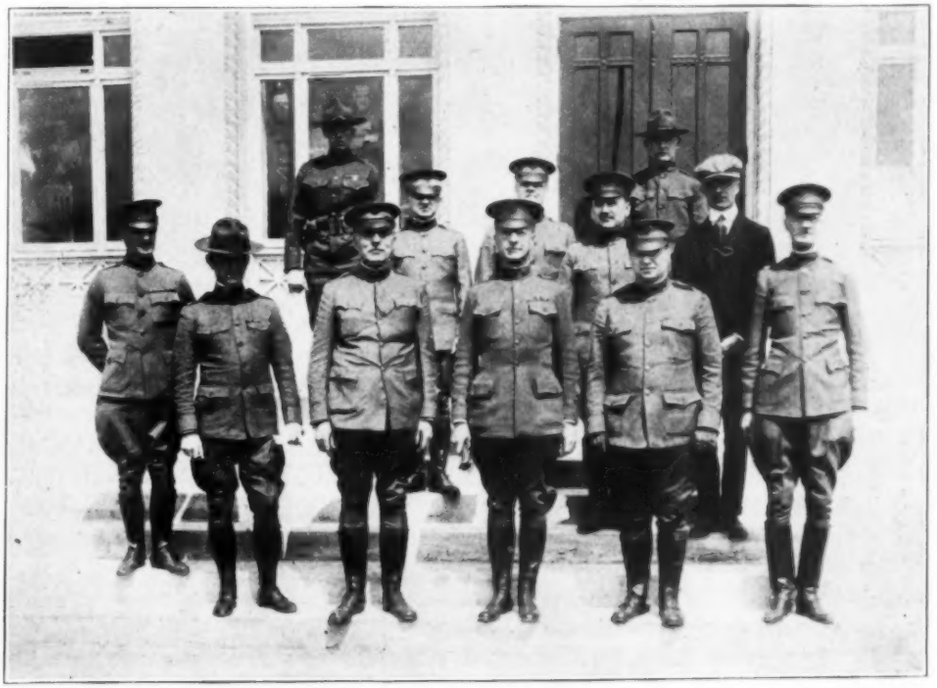
Since the original idea of Mr. Ford in the founding of his hospital was to make it a place where research would be carried on, it was necessary to provide facilities for presenting the results of investigation. One of these facilities was a large, well-lighted amphitheater. The first impression one got when he entered this amphitheater was that some attention had been paid to esthetic demands. In size, decorative effects, and lighting it appealed to one's sense of harmony and proportion. This amphitheater was in direct connection with each of the twelve operating rooms, so that for clinical purposes it was readily available. The system of artificial lighting in this amphitheater was well deserving of special mention. The overhead system was employed, and after repeated experiment, the architect was able to secure a result that prevented any interference of light, which would produce shadow effects.

By way of parenthesis, but for this splendid amphitheater the administration of the Army Hospital would have been greatly handicapped. For a long time it was the only place of public assembly to be had at the post. Later, the construction of a Y. M. C. A. hut and a Red Cross building met the growing auditorium demands. Also, when the hospital was running smoothly, daily clinics were held here by different members of the staff. This building also provided offices for the chiefs and the various heads of the section.

The laboratory building provided space for the dispensary, the morgue, x-ray department, bacteriologic and pathologic laboratories, the dental clinic and the animal house.

## Main Kitchen Model of Its Kind

One of the very essential features about a hospital is the kitchen. The main kitchen, in connection with the hospital, might well be taken as a model for future construction. Its spacious proportions, its ventilation, fume hoods, tiled floor, enameled walls and ceiling made it a place of beauty, and, at the same time, easy to keep clean and sanitary. Its large pantries and storerooms enabled the work to be done with the least possible waste of time. It was thoroughly modern in its equipment of ranges, both gas and electric, steam kettles and dishwashing machines, many of which the government supplied.



Major General Merritte W. Ireland, Surgeon General of the Army, and a group of officers who have just completed an inspection of United States Army General Hospital No. 36.

This kitchen space for the patients in the hospital was provided for in the service building, which also supplied storeroom for the commissary, refrigerators for the meat supply, office room for mess officers and assistants, and the

laundry. On the second floor was established a dining room for duty officers, with a small separate kitchen. The third floor of this building, which was divided into individual rooms, was used as quarters for non-commissioned officers.

Overseas patients began to arrive February 20, 1919, and were housed on the second floor of the surgical building. However, as wards in the main building were gradually completed, capable of accommodating approximately ninety patients per ward, patients were soon moved into the main building. As fast as the construction department completed a ward and notified the commanding officer that it was ready to be equipped to receive patients, it was equipped and the surgeon general's office notified, and the wards were rapidly filled to capacity. Equipment for the entire hospital which had been requisitioned for in November began to arrive in the early part of January and was stored in the hallways and basements.

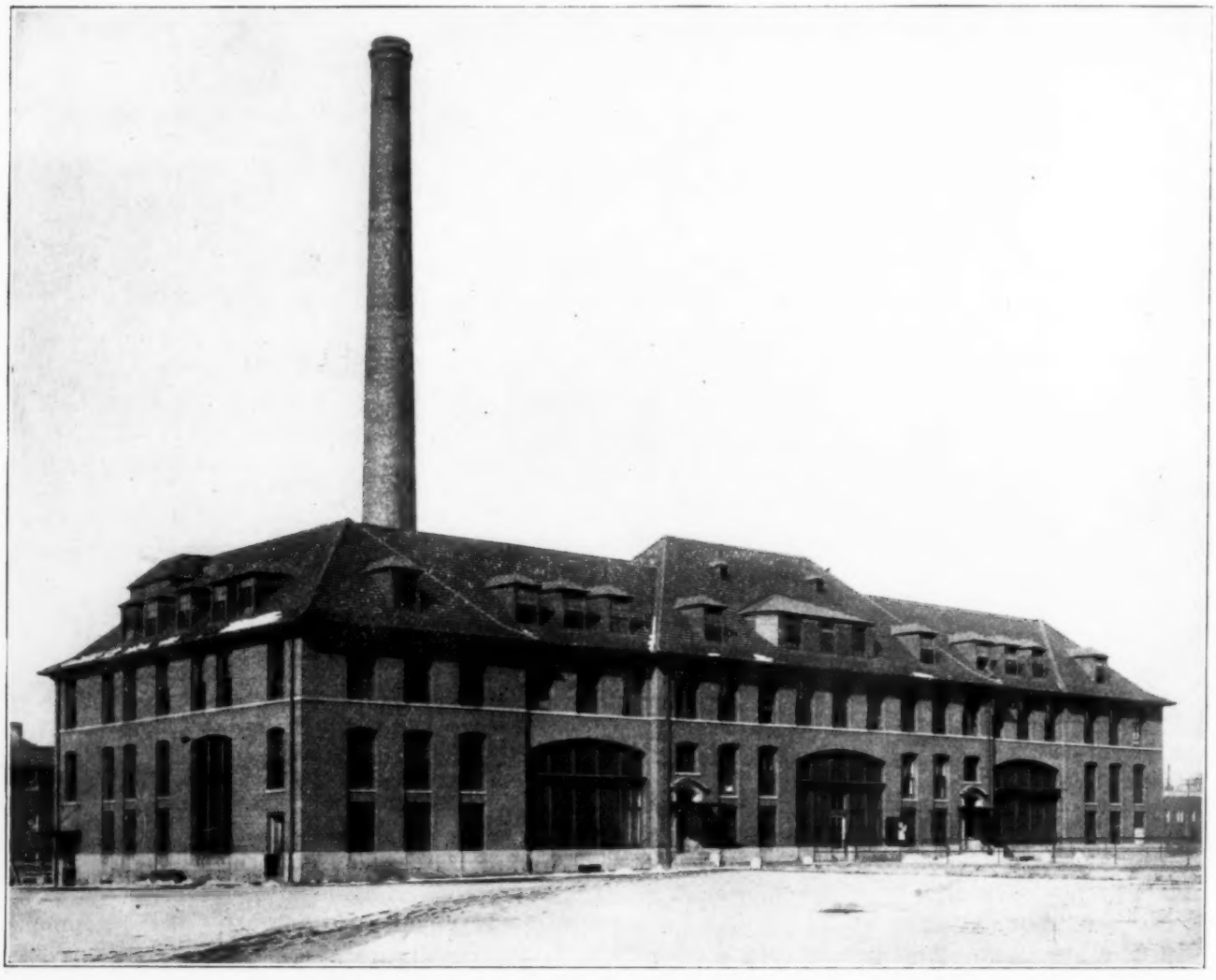
Approximately May 1, 1918, the nurses moved out of the surgical building into their permanent quarters in the east wing of the main building. The first and second floors of the west wing of the main building were assigned to the educational department, and this department proceeded to rapidly and efficiently organize and equip the two floors, so that this department was ready for work as soon as there were patients assigned to it.

## Entire Hospital Occupied by Army

By June 1, 1918, the construction division notified the commanding officer that the entire hospital was completed for occupancy by the army as a hospital, and the following arrangements were made:

The first floor of the rotunds of the main building was divided by railings and used as headquarters. The rest of the central part of the building —five upper floors—was used as barracks for enlisted men on duty at the hospital.

In the basement of the main building was situated the post exchange, the storerooms of the quartermaster department, diet kitchens, kitchens and mess rooms of the nurses on duty in the hos-



The non-commissioned officers were quartered in the Service Building, which also contained space for the kitchens, laundry and storerooms.

pital, and kitchen and mess room for enlisted men on duty in the hospital. The patients' kitchen was still retained in the service building, which was connected with the main building by a well lighted tunnel. Through this tunnel the patients' food was conveyed by an electric truck to their dining room and served hot from a large steam table. The cafeteria system was used in the dining room. Those patients who, because of wounds, crippling, or other reason were not able to come to the dining room were served either at tables in the wards or in bed. The food was sent up on dumb waiters from the kitchen and served hot from coal oil stoves in the wards—a small diet kitchen being improvised in each ward.

Before the construction of the main building, this surgical building was used as hospital headquarters. The offices were on the first floor, the second floor was utilized as a ward, and the third floor was used first as quarters for the nurses, and later as a ward. Since the construction of the main building, the entire building has been turned into surgical wards.

In the east wing of the main building (the third and fourth floors of which were divided up into private rooms), were assigned the permanent quarters for the nurses, isolation wards, on the second floor, and sick officers' ward, on the first floor. In this wing also were three large wards capable of accommodating ninety patients each, given over to the surgical department; also space for the Red Cross and space for the physiotherapy department. In the west wing were arranged six large wards capable of accommodating ninety patients each, two wards being assigned to the surgical service and four wards assigned to the medical service. Space for the educational department was assigned in this wing also.

The wards filled with patients as rapidly as they were finished. The completed wards gave the hospital a bed capacity of 1,500—this exclusive of barracks room for the enlisted men on duty, and quarters for nurses. In connection with all of the wards were rotundas where the patients might spend hours in recreation or instruction. The wards themselves were well-lighted, large enough for ninety beds comfortably, and at either side large porches allowed the bed and wheel chair patients to get plenty of air and watch outside activities.

Early in the spring the Y. M. C. A. decided to construct a building, which was completed in May and was of great benefit in keeping up the high state of morale of this hospital.

The Red Cross building was completed only about one month before the hospital closed. However, the Red Cross authorities were indefatigable in the activities which were assigned to them and did a great deal of good.

In this connection should be mentioned the excellent work done by the Knights of Columbus, Salvation Army, Jewish Welfare Board, and the American Library Association which established and completely equipped an excellent library and supplied a librarian.

One of the problems which confronted the army authorities as the hospital organization began to

take form was space for an athletic field, particularly a baseball diamond. It was not seen at first where space for this important item could be provided. The average officer soon learns that a baseball field near the men's quarters will go a great way toward keeping the men of a command happy and contented. In spite of limited space the men laid out a baseball diamond in one corner of the ground, which served the purpose very well, and the good accomplished in morale more than offset the broken window panes occasioned by its nearness to the hospital buildings. The situation also permitted bed patients to view athletic activities from the wards.

This is a gala day for the patients at United States Army General Hospital No. 36. The gaily decorated automobiles lined up before the main entrance have been furnished to take them to view the Red Arrow parade.

It is also well to mention the hospital paper "The Azuwer," published by the enlisted men on duty, patients in the hospital, and a well qualified staff consisting of more or less experienced newspaper men, which were ordered to the hospital for duty with the newspaper by the Surgeon General's office. This publication was a high type of journalism and proved a force for good during the life of the hospital. It paid its own expenses by advertisements and subscriptions.

The first operation, appendictomy, was performed December 23, 1918. The operations were varied in character and were of great interest.

The section of general surgery was organized November 16, 1918. Under the section of general surgery came the orthopedic section which was organized November 3, 1918; the genito-urinary section organized January 6, 1919; the section of neurology organized February 26, 1919, and the x-ray laboratory, which was organized as a section on January 8, 1919.

The entire surgical service was well organized and conducted by efficient and capable surgeons.

The physiotherapy department was first organized under the surgical service, but was later conducted as a separate service, an experienced officer to head this service being sent to the hospital.

## Medical Service Organized

The medical service, which was practically the first service organized because of the influenza epidemic, was organized December 15, 1918. The medical service received in excess of fifty per cent of the total of 2,040 admissions to the hospital. Many of those received in the medical service from overseas were convalescent to such a point that only a short residence in the hospital was required. An average of approximately 240 patients remained daily on this service. The receiving officer, it might be mentioned in passing, functioned under the chief of medical service.

The first cases admitted to the hospital for treatment were suffering from influenza. This epidemic in the command was limited to approximately 150 cases. There were none critically ill and there were no deaths. Daily inspections

were made and strict isolation was maintained.

The first overseas patients were admitted in February, 1919, and numbered approximately fourteen. These were principally men convalescing from influenza, pneumonia, and war wounds.

The educational service was organized January 15, 1918, on the assigning of a chief of this service by the surgeon general's office. The chief of this department was also made morale officer as it was thought that these two services were closely related.

In the scheme of rehabilitation of disabled soldiers and sailors returning from the front, this department of U. S. Army General Hospital No. 36 had a variety of services to perform. In order to function efficiently in the discharge of its duties, the educational work was apportioned among four divisions: (a) the pathological and statistical, (b) the technical, (c) the recreational, and (d) the general. The specific work of each division converged upon the control aim of the reconstruction purpose of the hospital as a whole, namely, the restoration of each person who was received to full mental and bodily vigor. The general aim was to restore the disabled men, physically and mentally. To make him as good a man physically, economically, and socially as he was before the injuries received in line of duty abbreviated his usefulness—that was the general purpose of this hospital.

The dental service was organized December 12, 1918, by the assignment to the hospital of a chief for that service. However, it was not until March 1, 1919, that this department was able to function as a service, as the rooms assigned to it were not fitted up until that date.

The quartermaster department was organized by a commissioned officer of the quartermaster corps. While the offices were in the main building, it was necessary to rent a warehouse some distance from the hospital in order to store certain supplies. This department, as is usual in all army organizations, had charge of the supply department of the hospital.

This vine-hung corridor in the old hospital building, has been put to many uses. During the construction of the main building, it was used first as a barracks, then as a store room, later as a ward, finally coming into the use for which it was originally intended.

The utilities and motor transport corps were well organized and officers were in charge.

All of the departments were, as is usual, coordinated under the direction of the commanding officer in order to correlate their workings. This was done by daily conferences at headquarters where the heads of all departments met and talked over the difficulties which had arisen or were likely to arise.

On June 26 the commanding officer received a letter from the surgeon general of the army setting forth that "Instructions have this day been received that U. S. General Hospital No. 36 will be abandoned, and, in accordance with request of the surgeon general of the Public Health Service dated June 16, 1919, it will be transferred to the Treasury Department. All patients and personnel will be out of the building by August

1, 1919. When all the medical department personnel and patients have been disposed of, you are directed to turn this hospital, with all supplies and equipment required by the Public Health, over to a proper representative of that office." Thereupon steps were immediately taken to expedite the movement of all patients and the discharge of the enlisted personnel. Subsequent instructions were received, however, that this hospital was to be turned directly back to the authorities, so that the hospital never functioned as a Public Health hospital.

Thus arose, served, and passed into history U. S. Army General Hospital No. 36. It is appropriate to record acknowledgement of the efficient, loyal, and sacrificing services, for the most part, of the men and women who have constituted its personnel. Without the dominant war motive and without the hope of popular acclaim they exerted their best talents, actuated, in many instances, almost entirely from a sense of patriotic duty. Their chief reward must always remain an inward satisfaction in having rendered to the nation an important service in according medical and surgical service, and in creating educational opportunities for men worthy of every consideration which a grateful people could bestow.

# HENRY FORD HOSPITAL IN TIME OF PEACE

By D. D. MARTIN, Detroit, Mich.

*Service to the patient is the one ideal to which everything has been subjected in this great hotel for sick people. Its radical departure from conventional types of architecture, the drastic methods of administration, and the development of new appliances make it of unusual interest. The new methods are not theories or experiments, but are all proved processes which were worked out in a model hospital conducted for two years. A hospital without a ward and with a private bath for every bed sounds like a dream, as does the fact that no provision is made for resident physicians, a nurses' home, or a dormitory for student nurses. These and other novel ideas are well carried out.*

PRESSED into service by the war department while still incomplete, and but lately turned back to its owner, the Henry Ford Hospital, Detroit, Mich., will soon enter the list of America's greatest houses of mercy. It might be expected that any venture on which Ford men embarked would, when completed, bear unmistakable marks of the influence of the great organization of which they are a part, and certainly such expectations are justified in the case of this hospital. The radical departure from conventional types of hospital architecture, the drastic changes in methods of administration, and the development of new appliances, all mark this institution as a Ford venture, conceived with the typical breadth of wisdom and executed with the splendid daring which is characteristic of Ford projects.

Right here, however, it may be well to say that the new methods which the Henry Ford Hospital will introduce are neither theories nor experiments. They are proved processes, worked out in detail in the model hospital which the heads of the present staff conducted for two years before even the first excavating was done for the present structure. During this period of preparation members of the staff visited the leading hospitals of the country, adopting those ideas which seemed good, rejecting those which could not be applied. Their small hospital was their laboratory. Here they worked out in detail every theory and every practice, and tried out each new appliance. Here too they developed in miniature the administrative system which is to make the Henry Ford Hospital a "hotel for sick people."

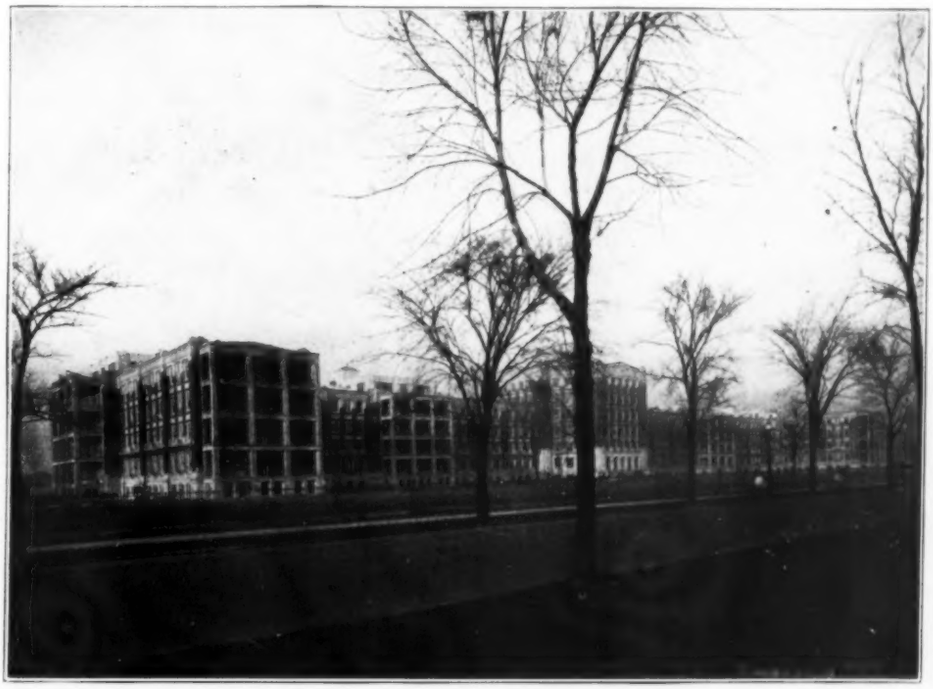
One of the principal results of this period of research and experimentation was the decision to build no wards in the new institution. Once the decision was made, attention was centered on the problem of a model room. Great attention was given to details, for details here were of supreme importance, and the staff believes that they have succeeded in working out a hospital room which for comfort, convenience, and utility is without an equal. Double doors which operate noiselessly and which open wide enough to admit the passage of a bed have been installed. A silent signal system which automatically records the time elapsing between the call of the patient and the reply of the nurse has been developed. The patients can be moved from their rooms to any part of the hospital without leaving their beds. A special type of rolling gear which can be driven noiselessly by electric power is being evolved. The rooms are built in pairs with a service shaft between. This shaft,

which is accessible through steel doors, contains lighting, heating, plumbing, and ventilating connections. A private telephone is installed in each room. These lines pass through a switchboard at the nurses' station in the service section of the unit so that calls reach the rooms only if the patients' condition makes it permissible. Much attention has been given to the subject of decoration in rooms and baths with the result that a note of color has been introduced which is far more pleasing and restful than the monotonous hospital white.

Private baths for every bed in a hospital are, of course, something of an innovation, but the experience of the Ford organization has shown them to be a very practical addition. It has been found that a nurse will frequently walk as much as eight miles in a thirty-foot corridor during her tour of duty. This not only means noise and confusion in the corridors, but it means loss of time in caring for patients, loss of energy to the nurse, and loss of efficiency to the hospital. One of the features of the bathroom is a special form of toilet bowl, designed to receive an inverted bedpan and to flush this utensil thoroughly with hot water. All metal fixtures in the bathroom are of German silver. The walls and floors are tiled. Temperature in the bedrooms and baths is controlled by an automatic device which may be adjusted as desired.

"Service to the patient"—that is the ideal which is the dominating thought. The private room with its bath and its many refinements is only one of the manifestations. To this ideal everything has been subjected. The great 700-foot building has been built about it; the administrative features were originated for the purpose of promoting it; it is the one supreme goal of the organization, and no doctrine, no theory, no tradition has been too sacred or to venerable to uproot if it did not promote this object.

The plans of the hospital, it will be noted, show no provisions for resident physicians, for a nurses' home, or for a dormitory for student nurses in the training school. It is the belief of the Ford organization that after spending eight hours at a hospital, doctors and nurses owe it to themselves and to their patients to get entirely away from the scene of their work. This plan was followed in the first Henry Ford Hospital and experience demonstrated its value so fully that there was never any doubt as to whether it would be adopted in the new institution.

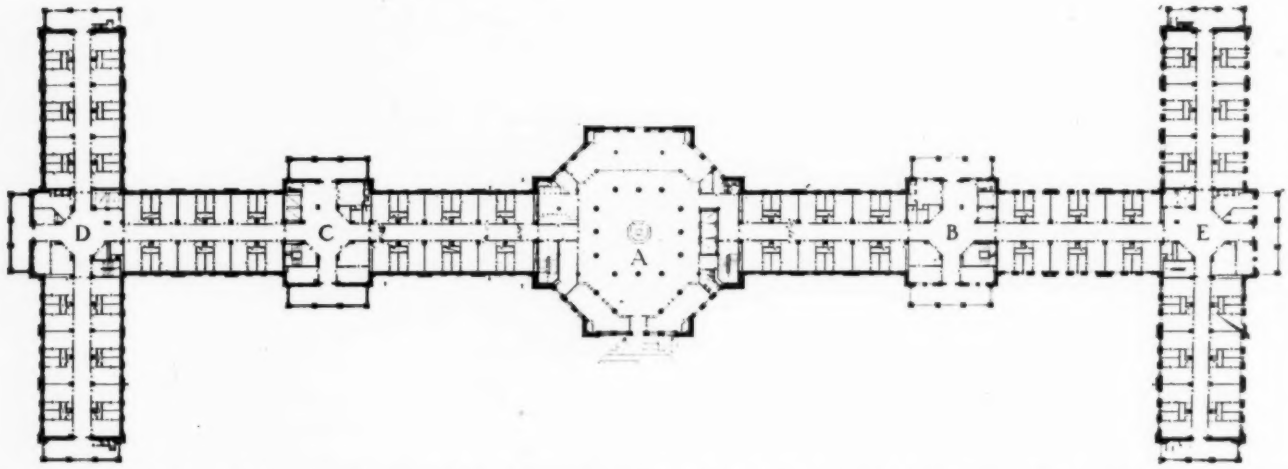


Exterior view of the Henry Ford Hospital, Detroit, Mich., taken while it was occupied by the United States Army as Army General Hospital No. 36.

The first problem involved in giving the patient efficient service is the elimination of delay. Here the aid of mechanical devices and of modern office systems have been enlisted to a greater degree than heretofore. In this feature of its work the institution is without a doubt a pioneer. To detail this system in its entirety would require too much space, and since the general plan of the building is yet to be explained it seems best to take up the two together.

The Henry Ford Hospital was designed wholly

by the Ford organization. It stands on a twenty-acre area at Hamilton and West Grand Boulevards, Detroit. Around the building stretches a vast expanse of lawn in which nature trees, some of them forty feet in height, are being transplanted. The entrance faces West Grand Boulevard, the pretentious driveway which once marked the limits of the community's growth but which today is a belt across the center of the city.




The general plan of all the floors except those in the diagnostic building is that of an elongated letter "H." The administration building, which forms the center, is octagonal in shape.

Situated well back from the street, the main building is displayed to excellent advantage. The structure is 700 feet long and four stories high, except for a hexagonal section in the center which measures six stories. Reaching out from this central section are two of the four units of the hospital proper, and across the end of each of these is another similar unit. Any one of these units, while physically a part of the whole, can be shut off completely in the case of necessity and still continue to operate as efficiently as before. There are twenty-four rooms on each of the four floors of a unit, 96 beds in a unit, and 384 beds in the hospital.

## Building Original in Type

No academic style of architecture has been followed. The building is entirely original in its conception, lacking that institutional air which often stamps so huge a structure with a cold and forbidding appearance. Impervious red pressed brick and Indiana limestone have been used effectively by the builders. Raked out joints break the effect of solid color in the walls and this is assisted by cream-colored panels bearing the emblem of the red cross, which run below the windows of the third and fourth stories, and by a band of red and green in Florentine brick work below the windows of the second story.

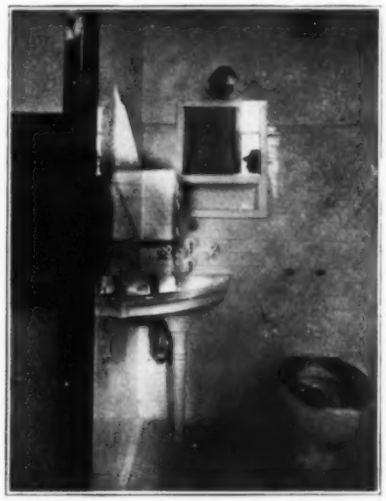
Each unit has a solarium and in addition to these there are forty spacious porches, or enough to accommodate every patient of the institution. The entire roof of the building is tiled and, since it is reached by elevators, can be used for any purpose desirable.

The hexagonal structure building is known as the diagnostic building. This is the nerve center of the institution. On the first two floors are quartered the administrative and executive offices containing public reception rooms, the division of records, telephone and telegraph stations, and general business offices. On the fourth floors above are the offices of the large staff of doctors together with their examining, consultation, and lecture rooms. The basement of the diagnostic building will be occupied by the x-ray section.

## High Standard of Efficiency

Readers of this magazine are probably well acquainted with the fact that the Henry Ford Hospital is a closed institution. This plan was tried out thoroughly and has been adopted as a settled policy. Naturally this implies all that such a policy means, as reflected in the best hospitals of this class. The Ford organization, however, has felt that this institution would be a failure if it did not go farther than this. The work of the staff, therefore, will be directed fully as much towards preventive medicine as toward corrective surgery and, in the effort to be of the utmost service, the best office practice of the business world have been coordinated to a remarkable degree with the science of medicine. Putting aside medical terminology, the intention is to turn over the capacity of the hospital as often as possible. In other words, the organization will seek, by the introduction of a skilled staff of administrative lay workers, by the creation of a highly trained force in the division of records, and by the cen-

tralization of every facility for diagnosis and treatment at the fingertips of the physicians, to shorten the time which a patient ordinarily spends in the hospital so that the maximum number of patients will be able to use the beds in the course of a year. This may, perhaps, sound formidable but in reality it is nothing of the sort. There is no reason for believing that hospitals cannot increase production, when organized with attention to business principles. As has been said before, the organization which is to make this possible has been worked out, the actual experiments have been made, the definite results are known, and the model hospital in which the experiment was made gained a national reputation for accurate diagnosis, for skillful surgery, and for efficient service to patients. This is, we are told, one of the "revolutionary" features of the Henry Ford Hospital. From our standpoint, however, "evolution" seems the more appropriate term. The experience of the Ford organization has shown, beyond the question of a doubt, that all hospitals must eventually come to this basis of operation if they are to meet the needs of their community and to serve it to the fullest extent.



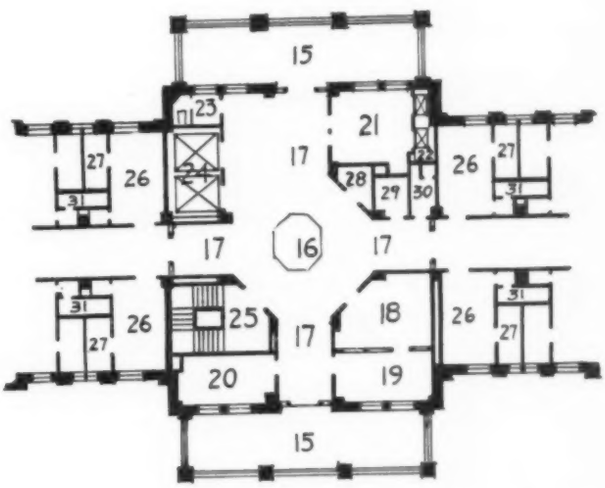
Each private room in the Henry Ford Hospital, has a bathroom in connection, similar to the one of which a corner is shown here.

## Complete System of Communication

The division of records, located in the diagnostic building, is one of the most important branches of the institution. No records will be kept in any other section of the building, and all filing is done in this office. A complete system of interdepartmental communication has been arranged which for completeness and rapidity of service cannot be excelled. Telephones, pneumatic tubes, and dictaphones are used. A doctor upon completing his diagnosis and dismissing his patient may pick up the transmitter of a dictaphone and dictate his record to a stenographer who has received special training in transcribing medical terminology and who is several floors below. Should a doctor desire a report on a previous diagnosis, or on the history of a certain type of case, he requests it by telephone and it arrives a moment later through the pneumatic tubes. All medical terminology has been reduced to a system of numerals and decimals which permits of a simple system of cross indexing, making it possible for lay workers to compile reports and records with astonishing rapidity and with absolute accuracy.

All requests for drugs, linens, or supplies of any kind are transmitted to the administrative offices and thence to the proper departments. There need be no delay, no waiting. A nurse can telephone from a patient's room for a glass of milk, walk to the serving kitchen off the service section of the corridor, and be sure of finding it waiting for her on the automatic elevator.

The ground floor plan of the Henry Ford Hospital showing the location of: (1) the kitchen; (2) elevators; (3) storage; (4) stair hall; (5) office; (6) corridor; (7) janitor's closet; (8) linen closet; (9) dumb waiter; (10) grade entry; (11) elevator and machine room; (12) men's toilet; (13) nurses' locker room toilet; (14) ramp.




In this diagram of the floor plan of the Henry Ford Hospital, the completeness of the detail and the convenience of arrangement are graphically disclosed. This typical floor plan shows: (15) porches; (16) nurses' station in corridor; (17) corridor; (18) utility room; (19) dressing room; (20) office; (21) diet kitchen; (22) dumb waiter; (23) public toilet; (24) elevators; (25) stair hall; (26) private rooms; (27) private toilets; (28) chart room; (29) linen closet; (30) linen chute; (31) pipe shaft.

In noting the floor plans of the hospital special attention should be given to the service sections. There is one of these sections in the center of each floor. Each is shut away from the corridors off which the patients' rooms open by sound-proof and fire-proof doors. Here have been placed the elevators, serving kitchen, chart room, linen closets, utility and dressing rooms, with a complete equipment of sterilizers and blanket warmers and an office for the doctor in charge. In the center of the section is a nurse's station with telephones and pneumatic tubes connecting it with the diagnostic building. Calls from patients' rooms are flashed upon a signal board at this station where requests for supplies are handled.

Note the ornamental detail of the brick and stone work. These walls are not simply of utilitarian value, but delight the artistic sense as well.

Every effort has been made to design and organize the service section in such a manner that sounds incidental to its operations will never reach the ears of the patients. Every apparatus or machine is as silent as it can be made. Doors close silently, without so much as the click of a latch, signals are seen but not heard, elevators come and go soundlessly, and even the typewriters are of noiseless type.

## Plans Perfected in First Hospital

Back of the main hospital building are the older buildings of the first Henry Ford Hospital in which the staff perfected the plans that have been carried out in magnified detail in the new structure. Here there is a private patient's building of seventy rooms, a laboratory building, service building, power house, and the wonderful surgical pavilion. All of these structures are connected by sunken corridors which are well ventilated, lighted, and heated.

The laboratory building is as complete as modern scientific equipment can make it. The service building contains the kitchens, laundry, stock room, and present offices of the organization. The power house, which is being enlarged, supplies all buildings with heat and with electric current for cooking, lighting, and elevator service. The surgical pavilion of the hospital is unique in many respects and contains what the leading surgeons of the country have declared to be the finest operating rooms that were ever constructed.

## "Helping the Other Fellow"

In concluding this article, in which it has been possible to sketch the plan of the new hospital and the features of its administration in only the broadest way, it should be said that while the hospital will hold no free clinics and will make uniform charges for services to every patient, there is no intention of operating for profit. This institution is a material manifestation of Henry Ford's dearest ideal, "Help the Other Fellow." And while personal identity may be submerged for the upbuilding of the organization there is never a lack of that sympathetic understanding humanity craves in its hour of sickness and trial.

# THE PURPOSE AND METHODS OF AIR CONTROL IN HOSPITALS *

By ELLSWORTH HUNTINGTON, Ph.D., Research Associate in Geography, Yale University, New Haven, Conn.

## PART I. THE IDEAL CONDITIONS OF THE AIR

*Five atmospheric conditions, temperature, humidity, purity, movement, and variability ought to be considered in all systems of ventilation and heating.*

*Present methods of ventilation have not produced widespread benefits, due to failure to appreciate the importance of the right kind of air, and to imperfect knowledge of what ideal conditions really are.*

*Recent statistics prove: (1) that 10° of temperature may make a 10 to 27 per cent difference in the death rate; (2) that an increase in the death rate accompanies decrease in relative humidity; (3) that variability in temperature influences the death rate.*

THE effect of the air on health is constantly receiving fuller recognition. Seemingly insignificant variations in temperature and humidity are now found to have an extraordinary effect on health in all parts of the world. The day seems approaching when everyone will recognize the truth of the statement of Fisher and Fisk that "Air is the first necessity of life." Such recognition ought to produce widespread benefits, for the evils which arise from unfavorable atmospheric conditions can easily be remedied in hospitals, and can be largely ameliorated in houses, schools, offices, factories, and public buildings. The two greatest hindrances are: first, a failure to appreciate the vital importance of the right kind of air; and second, imperfect knowledge of what the ideal conditions actually are. The purpose of this article is to sum up the evidence as to the ideal and as to the harm done by departure from it, and then to point out how the ideal may be attained, and at what cost.

The most important atmospheric conditions are: (1) temperature, (2) humidity, (3) purity, (4) movement, and (5) variability. These are arranged in the order in which they are usually considered in systems of ventilation and heating. In most such systems over 95 per cent of the attention is concentrated on producing an ideal temperature; yet, even so, we still suffer from too much heat. The importance of humidity is also widely recognized; most furnaces contain a water pan, and a dish of water sits on many a radiator. Neverthless, the recognition is largely perfunctory and utterly inadequate. Relatively speaking, the conditions of humidity are as bad as those of temperature would be if we let our living rooms range anywhere from 50° to 80°. This is largely because the effects of atmospheric humidity are commonly confused with those of temperature and dampness.

Turning to the purity of the air, we are confronted by quite a different situation. In the first place, whatever may be the common practice, there is universal agreement as to both the value and character of pure air. In the second place, nature when left to herself promptly creates ideal conditions of purity, unless the climate is so dry that the air is contaminated by dust. Hence our problem is the simple one of helping nature by cleaning out the dust and taking out the impurities for which we ourselves are responsible.

### Movement and Variability

The two remaining conditions, movement and variability, are so intimately connected that they may well be considered together. In order to secure purity, a few of the best managed hospitals and public buildings pay some attention to the movement of the air, but even this is rare. In fact, most people think that movement of the air means drafts and colds. As to variability the condition is still worse. Not only is there no attempt to obtain the right kind of variations of temperature, but every effort is made to avoid any variations whatever. Yet the movement, and especially the variability of the air, appear to be among the chief causes why outdoor life is so much better than indoor. Time and again the experiment has been tried, although it has been ostensibly for the purpose of giving patients "fresh" air rather than variety. Keep a patient indoors with a uniform temperature of 68° and with an abundant supply of air which is absolutely fresh and pure, but which has no perceptible movement. Put the same patient out of

*First installment of an article appearing in two parts, by Ellsworth Huntington, Ph.D., Research Associate in Geography, Yale University, New Haven, Conn. The second installment will appear in the May issue, under the title, "Methods of Air Control and Their Results."

doors in a temperature ranging from 60° in the morning to 70° at noon. Let him enjoy the fresh air as it sweeps gently across his face; let him feel the sudden little drop of temperature when a cloud obscures the sky, or when a pleasant breeze blows briskly for a minute. For hour after hour let him experience the tingle of strengthened circulation that comes with the constant movement and variation of the outside air. Every one knows that the patient who is alternately soothed and stimulated in this way has a much better chance of recovery than the one who feels the same fresh air, is warmed by the same sun, and looks upon the same scene behind a barrier of windows that prevent perceptible movement or variation. Slight as is the difference between the outdoor and indoor air, its effect is almost magical. The difference lies in the degree of movement, and especially of variability, for such variability is a universal quality of outdoor air in all good climates.

Let us now define the ideal conditions toward which our efforts should be directed. We shall omit purity, on the assumption that it is so well understood that further discussion is unnecessary. Movement and variability will be considered together, with chief emphasis on variability, since that is the condition least understood.

## The Ideal Temperature

The evidence as to the ideal temperature is abundant. Every one knows that 70° is as high as the temperature should ever go in ordinary living rooms. Nevertheless, overheating is well-nigh universal. Out of 508 thermometer readings reported by Palmer* in a government office in Washington, only 14 per cent were within the desirable temperature range of 65°-70°, while 44 per cent were over 74°. In five theaters in New York the temperature ranged from 70° to 80°, and in only one did it fail to rise above 72°. According to the New York State Commission on Ventilation, such temperatures produce a slight fever in the sense of a detectible rise of body temperature. The Commission found, for example, that when sedentary persons are kept from morning till late afternoon in temperatures of 68° and 75°, respectively, the warmer room by the end of the afternoon induces an added strain of twenty-three pulse beats per minute. Yet even this is unsuccessful in preventing a rise of body temperature equivalent to 1.5° above what would have prevailed in a temperature of 68°. Part of this unfavorable result was probably due to extremely low humidity, but even so, the effect of temperature alone is extraordinary.

Other studies point equally clearly in the same direction. The following table shows the average temperature at which the best work was done or the fewest deaths occurred in a number of widely scattered instances.*

TABLE 1.

Effect of Temperature on Health and Strength.*
Effect of Difference of 10° F. on Death Rate

| | No. Cases | Criteria | Best temp | |
|---|---|---|---|---|
| (1) | 781,000 | Deaths, north Italy, 1899-1913 | 58° | 21% |
| (2) | 300 | Piece work, men, 2 Conn. factories, 1910-13 | 59° | .... |
| (3) | 200 | Piece work, girls, 1 Conn. factories, 1911-13 | 60° | .... |
| (4) | 8,000 | Deaths, British Columbia, 1914-16 | 62° | 25% |
| (5) | 122,000 | Deaths, Southeastern U. S., 1900-12 | 62° | 10% |
| (6) | 9,000 | Piece work, Pittsburgh, 1910-13 | 63° | .... |
| (7) | 752,000 | Deaths, Southern Italy, 1899-1913 | 63° | 27% |
| (8) | 380 | Cigar makers, Cubans, Tampa, Fla. 1913A | 64° | .... |
| (9) | 838,000 | Deaths, Southern France, 1901-10 | 64° | 17% |
| (10) | 2,500,000 | Deaths, Northeastern U. S., 1900-12 | 64° | 15% |
| (11) | 921,000 | Deaths, Whites, Eastern U. S., 1912-15 | 64° | 12% |
| (12) | 71,000 | Deaths, Dry Interior of U. S., 1900-12 | 64° | 15% |
| (13) | 1,315,000 | Deaths, Northern France, 1901-10 | 65° | 17% |
| (14) | 739,000 | Deaths, East Central U. S., 1900-12 | 65° | 18% |
| (15) | 400 | Cigar makers, Cubans, Tampa, Fla. 1913B | 65° | .... |
| (16) | 167,000 | Deaths, Negroes, Eastern U. S., 1912-15 | 68° | 12% |
| (17) | 380 | Cigar makers, Cubans, Tampa, Fla. 1912 | 68° | .... |
| (18) | 142,000 | Deaths, California, 1900-12 | 70° | 18% |

In this table, twelve of the eighteen examples show that the best conditions of health and energy prevail when the temperature averages from 62° to 65°. These twelve embrace six of the seven examples where the number of cases is over 500,000, and if it were not for accidental circumstances, such as epidemics, Northern Italy would fall in the same group. Among the three cases where the optimum or best conditions appear to be above 65°, two pertain to people from hot countries, while in California the relative frequency of breezes during the months averaging about 70° gives such temperature an advantage. In general, the table seems to leave little room for doubt that for physical health the best average temperature for day and night is about 64° F. With such an average, the thermometer is ordinarily not far from 70° at noon and perhaps 58° in the morning. Temperatures much above 70° rarely prevail for any length of time, and throughout most of the day 60° to 70° is the rule. This agrees with all the other evidence in showing that in our hospitals a temperature of 64° to 68° is high enough by day, while by night the air should be cooler. If the air is properly humidified, such conditions will rarely feel cool. The problem of securing them presents no difficulties and merely demands a little care. If people could only be made to realize that the difference between 67° and 72°, for example, often means a difference of 5 per cent in the death rate, they would think it worth while to take pains. The remarkable effect of a few degrees of temperature appears in the right-hand column of Table 1. Since a difference of only

*George T. Palmer: Role of Ventilation in Preventive Medicine, Vol. 1, 1919, pp. 509-515.

*The data in this table compiled from two volumes entitled "Civilization and Climate," Yale University Press, 1915, and "World Power and Evolution," Yale University Press, 1919, by Ellsworth Huntington.

10 degrees in temperature may make a difference of from 10 to 27 per cent in the death rate, it is impossible to take too much pains with the temperature of our hospitals.

Although the evidence as to humidity is not so abundant as in respect to temperature, it is scarcely less convincing. Since the effect of humidity varies according to temperature, we must carefully distinguish between temperatures above and below the optimum of 64°.

At the optimum temperature in every one of the groups of deaths listed in Table 1, the best conditions of health prevail when the humidity averages 70 per cent or more. With higher humidity no special harm seems to follow at this temperature, while at lower humidities there is universally an increase in the death rate, ranging from 5 to 15 per cent, according to the degree of dryness.

At still lower temperatures the effect of humidity is even greater, as appears in Table 2, which shows the approximate effect of a difference of 10 per cent in humidity under various conditions of temperature.

TABLE 2.*

Effect of Humidity on the Deathrate.

A. Increase in the Deathrate Accompanying a Decrease of 10 Per Cent in Relative Humidity at a Temperature of 40° F.

| | | |
|---|---|---|
| (1) | Northeastern United States 1900-1912 | + 0.8 Per cent |
| (2) | East Central United States 1900-1912 | + 1.3 Per cent |
| (3) | Dry Interior of the United States 1900-1912 | + 2.0 Per cent |
| (4) | Boston (Death after operations) 1906-1915 | + 3.1 Per cent |
| (5) | Large cities of U. S. (Whites, non-cont. dis.), 1912-1915 | + 3.3 Per cent |
| (6) | Large cities of U. S. (Negroes, non-cont. dis.), 1912-1915 | + 4.0 Per cent |
| (7) | British Columbia 1914-1916 | + 7.0 Per cent |
| (8) | Large cities of U. S. (Whites, contag. dis.), 1912-1915 | + 9.5 Per cent |
| (9) | Southern France, 1901-1910 | +10.0 Per cent |
| (10) | Northern France, 1901-1910 | +11.0 Per cent |
| (11) | Northern Italy, 1899-1913 | +12.5 Per cent |

B. Increase in the Deathrate Accompanying a Decrease of 10 Per Cent in Relation Humidity (at all temperatures) Dec.-March, 1900-1914.

| | | |
|---|---|---|
| (12) | St. Louis | + 0.6 Per cent |
| (11) | Northern Italy, 1899-1913 | +12.5 Per cent |
| (12) | St. Louis | + 0.5 Per cent |
| (13) | New York City | + 1.2 Per cent |
| (14) | San Francisco | + 3.8 Per cent |
| (15) | Baltimore | + 5.0 Per cent |
| (16) | Chicago | + 7.8 Per cent |

C. Increase in Daily Deathrate Accompanying a Decrease of 10 Per Cent in Relative Humidity (at all temperatures) during the Influenza Epidemic in New York City (Sept.-Dec., 1918) and Boston (Oct., 1918-April, 1919).

NOTE: The figures here indicate percentages of the average daily change in the deathrate instead of percentages of the actual deaths. Hence the figures are perhaps five times larger than if they were reckoned as in A. and B.

| | | |
|---|---|---|
| (17) | Onset of Influenza, Boston | + 3.0 Per cent |
| (18) | Onset of Influenza, New York | + 6.9 Per cent |
| (19) | Deaths from Influenza, Boston | +11.3 Per cent |
| (20) | Deaths from Pneumonia, New York | +21.6 Per cent |
| (21) | Deaths from Influenza, New York | +26.2 Per cent |
| (22) | Deaths from Pneumonia, Boston | — 8.3 Per cent |
| (23) | Onset of Pneumonia, Boston | — 1.8 Per cent |

Table 2 represents all the available data except those of Greenberg, and certain others to be given shortly, all of which point in the same direction. In 21 out of the 23 sets of data, the moister days have an advantage over the drier. Even the smallest figures, such as 0.8 per cent for the northeastern United States, are significant, for the houses in that section are so over-warmed that when the temperature outside averages 40° the relative humidity inside averages only a little over 30 per cent. If this were raised to 70 per cent it would multiply the figures in Table 2 by four. The negative figures for Boston, Nos. 22 and 23, appear to be accidental. Taking Table 2 as a whole, it seems quite clear that an increase of 10 per cent in humidity at low temperatures is correlated with an average decrease of 3 to 5 per cent in the death rate.

Let us next see how a given quantity of water in the air influences the death rate at various temperatures. A cubic foot of air, it will be remembered, can hold approximately two grains of water vapor per cubic foot at 20° F., and about eight at 70°. On the basis of the deaths from lobar pneumonia in New York City from April. 1917, to March, 1918, an additional grain of moisture per cubic foot of air would have diminished the death rate as shown in Table 3.

TABLE 3.

Effect of One Grain of Water per Cubic Foot of Air in Diminishing the Deathrate from Lobar Pneumonia in New York

| A. Mean Temperature | B. Actual decrease in daily deaths for one additional grain of water per cubic foot. | C. Percentage decrease in daily deaths. |
|---|---|---|
| 20° or less | 10.5 | 39.6 Per cent |
| 21-32° | 1.3 | 4.9 Per cent |
| 33-55° | 1.1 | 4.0 Per cent |
| 46-55° | 2.3 | 11.1 Per cent |
| 56-65° | 2.7 | 15.5 Per cent |
| 66-70° | 1.2 | 12.8 Per cent |
| 71-75° | 0.2 | 3.2 Per cent |
| 76° or more | 0.004 | 0.06 Per cent |

Another set of figures of the same kind is given in Table 4. These apply to deaths after operations in Boston hospitals.

TABLE 4.

Effect of One Grain of Water Per Cubic Foot of Air in Diminishing the Deathrate After Operations in Boston, 1906-1915.

| A. Mean Temperature | B. Percentage decrease in deaths for one additional grain of water per cubic foot. |
|---|---|
| 30° or less | 9.2 Per cent |
| 31-40° | 16.5 Per cent |
| 41-50° | 8.8 Per cent |
| 51-60° | 13.7 Per cent |
| 61-70° | 4.6 Per cent |

Tables 3 and 4, together, seem to show that except at high temperatures, an increase of water vapor in the air is decidedly beneficial. On the whole, the greatest benefit seems to accrue when the outside temperature is about 60° F., but further data are needed before there can be any certainty on this point. At high temperatures, however, the effect of humidity is not at all the same as at low, as appears in Table 5.

TABLE 5.

Daily Deaths in Boston Hospitals after Operations Performed when the Temperature was above 70° at 8 A. M.

| | | | | | |
|---|---|---|---|---|---|
| Relative humidity | under 40 per cent | 0.937 | deaths | per | day |
| " | 41-50 per cent | 0.489 | " | " | " |
| " | 51-60 per cent | 0.244 | " | " | " |
| " | 61-70 per cent | 0.280 | " | " | " |
| " | 71-80 per cent | 0.347 | " | " | " |
| " | 81-90 per cent | 0.500 | " | " | " |
| " | 91-100 per cent | 0.775 | " | " | " |

In Table 5 notice how systematically the death rate diminishes with rising humidity up to 51-60

*These tables are based on data given in the two volumes mentioned above and in the following articles:

"The Interpretation of the Deathrate by Climographs": Modern Medicine, Vol. 1, 1919, pp. 13-22.

"Air Control and the Reduction of the Deathrate after Operations": Modern Medicine, Vol. 1, 1919, pp. 463-468 and 555-558.

"The Control of Influenza and Pneumonia by the Weather": to appear in the first number of a new magazine entitled Ecology, published by Ecological Society of America.

per cent, and then increases once more. It would be hard to find stronger evidence of the extreme sensitiveness of the human body to variations in humidity. If hospitals were so equipped that they could have any desired degree of humidity at all seasons, the saving in health would be great.

## The Ideal Variability

The effect of variations of temperature is closely correlated with the effect of movement of the air. Both are favorable, but just how much benefit arises from one and how much from the other is not yet certain. One of the most striking experiments along this line was carried on by the New York State Committee on Ventilation. The committee tested several thousand children, part of whom were in school-rooms where the temperature was kept uniformly at 68° by a supposedly ideal system of fan ventilation, while the rest were in rooms where the temperature averaged the same, but where it varied much more, because the windows were frequently opened to give outside ventilation. In the rooms with the supposedly ideal ventilation, the absences on account of respiratory diseases were 30 per cent more than in those with the variable temperature due to window ventilation. Among the pupils actually in attendance the cases of respiratory diseases were 236 per cent more numerous in the rooms with the monotonous invariable temperature than in those with the variable temperature.

Equally striking are the results of a study of daily changes in the death rate during a period of eight years in New York City, with 400,000 deaths as a basis. On days when the temperature dropped, no matter what the season, there was a marked decrease in the death rate, while on days when it rose there was an increase. The good effects of a fall, however, were not balanced by the bad effects of a rise. If we take the hundred days with the greatest drop and the one hundred with the greatest rise, as appears in Table 6, we find that these two sets of days combined had the following advantage over days when there was little or no change in temperature.

TABLE 6.

Effect of Variability on 400,000 Deaths in New York, 1877-1884.

| | |
|---|---|
| Autumn | +1.6 Per cent |
| Winter | −0.5 Per cent |
| Spring | +0.4 Per cent |
| Summer | +3.2 Per cent |

In winter it will be seen that the variable days did not have an advantage over others, since they were too extreme. If, however, we could eliminate not only the great dryness which almost invariably accompanies a drop in temperature, but the overheating, which with equal constancy accompanies a rise of temperature, we should doubtless find that at all seasons the advantage of the variable weather would be as great as in summer. How this works in certain individual ailments may be judged from the following figures. For example, Table 7 shows that after operations performed in Boston hospitals during December, January, and February, the death rate was 4 per cent greater in variable weather than at times with the least change during the winter. At that season, just as in the preceding case, the good effect of variability is overcome by extreme dryness and by overheating. On the other hand, from March to November the days with a strong change of temperature in either direction have an advantage of 40 per cent over those when the change is less than 3° in either direction.

TABLE 7.

Deaths Per Day in Boston Hospitals Under Different Conditions of Variability

| | Change of 9° or more in either direction | Change of 4°-8° in either direction | Change of less than 3° in either direction |
|---|---|---|---|
| Dec.-Feb. | 0.340 | 0.336 | 0.326 |
| Mar.-Nov. | 0.245 | 0.288 | 0.343 |

A similar case is found in the studies of pneumonia and influenza already mentioned. The change in the death rate from day to day on days with great variability and with slight variability of temperature appears in Table 8. Here, however, in Section 1, the variable days show an advantage even in winter.

TABLE 8.

Advantage of Days Having a Strong Change of Temperature in Either Direction Over Those Having Little or No Change.*

Section 1. Normal Condition.

| | | |
|---|---|---|
| (1) | Lobar pneumonia, New York (Apr.-Sept.) | 1.9 |
| (2) | Lobar pneumonia, New York (Oct.-March) | 2.2 |
| (3) | Broncho pneumonia, New York (Apr.-Sept.) | 1.3 |
| (4) | Broncho pneumonia, New York (Oct.-March) | 0.7 |

Section 2. Epidemic Conditions

| | | |
|---|---|---|
| (5) | Onset of Influenza, New York City, (Sept.-Dec.) | 11.0 Per cent |
| (6) | Deaths from Influenza, New York City, (Sept.-Dec.) | 11.1 Per cent |
| (7) | Deaths from Influenza, New York City, (Sept.-Dec.) | — 2.1 Per cent |
| (8) | Onset of Influenza, Boston, (Oct. 1918-April, 1919) | 12.3 Per cent |
| (9) | Deaths from Influenza, Boston, (Oct. 1918-April, 1919) | 16.3 Per cent |
| (10) | Onset of Pneumonia, Boston, Oct. 1918-April, 1919) | — 7.3 Per cent |
| (11) | Deaths from Pneumonia, Boston, (Oct. 1918-April, 1919) | — 6.6 Per cent |

In Section 2 it appears that even during the abnormal epidemic period of 1918 patients suffering from the two types of pneumonia and from influenza were generally benefited by variations of temperature, in spite of the fact that Nos. 7, 10, and 11 depart from this rule. Apparently, if variations could be secured without at the same time causing either chills, undue dryness, or unduly high temperature, variability would always be healthful.

Under normal circumstances, the benefit derived from variability appears to range all the way from nothing up to 40 per cent. This, be it remembered, is the effect of single days, which

*In Table 8, Nos. 1-4 show the actual amounts by which the net changes in the deathrate on days with great variability of weather were more favorable than the changes on days of uniform weather. In Nos. 5-11 similar data are given in percentages of the normal change from day to day, and are thus on a scale about 5 times that of Nos. 1-4.

are usually separated by other less favorable days. Moreover, this is the residual effect in spite of all the influences of temperature and humidity which usually act in a contrary direction. What the true average is when allowances are made for these other factors no one can tell, but it would not be surprising if variability alone influenced the death rate by 5 or even 10 per cent. If this is so, it ranks with tuberculosis as one of the greatest single factors in determining the health of the community, and should receive corresponding attention. Its proper understanding may prove one of the important steps toward stamping out tuberculosis itself.

For the sake of argument, let us suppose that proper temperature would reduce the death rate 5 per cent, proper humidity another 5 per cent, purity 2 per cent, and proper movement and variability 3 per cent. In view of the tables here given, these figures seem conservative. Yet they mean that proper air control might theoretically cut more than two hundred thousand from the death roll of the United States each year. But suppose only a tenth of this figure is attainable. Is it worth while? At the low valuation of $5,000 per life, 20,000 lives make a total needless death tax of $100,000,000 per year. Surely it will pay to learn the art of controlling the air.

# THE TRAINING OF HOSPITAL SUPERINTENDENTS

By S. S. GOLDWATER, M.D., Superintendent, Mount Sinai Hospital, New York City

THE technical knowledge which a hospital superintendent is in a position to use to advantage embraces the following principal subjects: medicine in all its branches, sanitation, hygiene, vital statistics, the theory and practice of nursing, sociology, law in its application to hospitals, hospital planning, building construction, heating, illumination, ventilation, domestic science, accounting, and the science of business. To find a man that has been trained in all of these branches is a task so difficult that, as a rule, the trustees of a hospital in search of a superintendent, make no attempt to measure candidates by any rigid test of technical knowledge, but are content to discover a candidate possessing an attractive personality, executive ability, and some hospital experience.

The functions of the hospital superintendent are commonly defined in some such terms as the following: the superintendent is the executive officer of the board of trustees, and is responsible to the board for the enforcement of its rules and orders; he is entrusted with the superintendence of all the activities of the hospital except those pertaining to diagnosis and treatment. Specifically, the superintendent is usually directed to make regular inspections of the various departments, to control the admission and discharge of patients, to engage, dismiss and fix the wages of minor employees, to see that laws and ordinances applicable to the administration of the hospital are duly observed, to record receipts and expenditures, to purchase necessary supplies, and periodically to present a report of progress to the board of trustees. These things the superintendent is specifically instructed to do. In addition, the trustees look to him to assist in the planning of new buildings, to see that the equipment of the hospital is renewed as often as may be necessary, to see that patients are satisfied, to cultivate the good will of the public, to keep peace among the factious groups that so frequently spring up within the organization, to check the exuberant spirit of interns, and to persuade mechanics, office workers, and domestic servants to work for the hospital for half or two-thirds of the wages prevailing in industry and in private domestic service, respectively.

I have thus far attempted to summarize (a) the technical knowledge that the hospital superintendent can use to greatest advantage, (b) the personal qualities which more than anything else influence trustees in the selection of superintendents, (c) the duties which custom formally assigns to them, (d) the additional things that superintendents must do and do well in order to score a success. I shall now refer to an aspect of the question which, in my opinion, is of paramount importance.

What the hospitals *ask for* is a superintendent who will see that the policies of the trustees are carried out, that established rules and regulations are enforced; what the hospitals *need* is an executive capable of initiating measures to fit the hospital's program accurately to the needs of the community, of planning the interior organization of the hospital so as to make the institution 100 per cent effective in the care of the sick, in the training of doctors and nurses, in the advancement of medicine, and as a means to these ends, in maintaining the health and spirits of the whole body of hospital workers.

Hospitals have need of leaders who have mastered the theory of hospital administration,

which unfortunately still lacks definition, and who possess the ability to formulate a program and to see it through. To carry out the policy of the average board of trustees is not enough. Without ungraciously or ungratefully belittling the fine public spirit or the extraordinary generosity of hospital trustees, one may in all candor state the fact that trustees usually take their places on hospital boards knowing comparatively little of the medical needs of the community, of the state and the requirements of medical education and practice, of the significance of the infinitely varied forms that organized medical effort may take, of the relative merits of different types of hospital organization. Here and there trustees are encountered who, having devoted themselves to the service of hospitals for many years, have become well informed concerning current hospital practice, and relatively efficient in routine hospital administration; experts in the strict sense of the term they would hardly claim to be. It is true that in many cases the medical staff, or some influential member of it, is responsible for shaping the hospital's program and policy. But few clinicians have the time, the inclination or the capacity to acquire a well-rounded view of the complex problems of which medical administrators are gradually becoming aware. Is it surprising, under these circumstances, that there is neither rhyme nor reason in the way in which the hospitals in any large American city are created, distributed, coordinated, supported, or related to medical research, medical education, or the needs of the community? Few communities have made any systematic study of their hospital requirements. Rarely does it occur to public officials or to a board to institute a searching inquiry into the fundamental questions which lie at the root of hospital planning, organization, and management. Let me cite a few of these questions:

Hospital location, with relation to the needs and convenience of the population.

The size of hospitals in relation to economy of construction and administration.

The size of individual departments, or units of construction, in relation to economy and efficiency of administration.

By what rule or rules can the hospital requirements of a community be determined?

The circumstances under which medical treatment should be domiciliary rather than institutional.

The extent to which standards of hospital provision (number of beds in proportion to population) and hospital service (organization and equipment) may be wisely imposed by law.

The proper proportion, in a given hospital or community, of private rooms, semi-private wards and free beds.

The conditions that justify free hospital treatment.

What classes of "special" hospitals are desirable; and what should be their capacity?

Should cases of contagious disease be cared for in general or in special hospitals?

The development of group diagnostic facilities for persons of moderate means.

How can physicians in rural communities make the nearest approach to that efficiency in clinical practice that springs from specialization and the division of labor?

What changes in hospital policy are suggested by the study of rejected applicants for admission?

By what principles should the use of public money for the support of patients in private or semi-private hospitals be governed?

Under the social and political conditions prevailing in the United States, should the establishment and development of municipal or voluntary hospitals be advocated?

Is private hospital administration compatible with (a) compulsory health insurance; (b) with state medicine?

From the standpoint of effective medical team work, what is the most desirable number and character of clinical departments in a general hospital?

How should the laboratory departments be organized for the purpose of securing maximum efficiency in diagnosis and research?

What is the best means of securing an expert staff (examination, arbitrary selection)?

What are the most effective measures for discovering automatically any tendency toward deterioration in the work of the staff?

The relative merits of part time and full time, and of paid and unpaid medical service in communities and hospitals of varying size and character.

To what extent should patients be followed after discharge in order to ascertain the results of treatment?

What term and character of service are required to fit interns for general practice?

Is the standardization of medical nomenclature feasible?

How should the hospital's medical statistics be utilized?

The function and proper limits of the out-patient department.

Should tuberculosis and venereal clinics be combined with general dispensaries?

The coordination of out-patient and in-patient departments.

The utilization of the hospital for the instruction of physicians not members of the staff.

The adaptation of the nursing curriculum to meet modern needs.

What is the relative cost of pupil nurses, properly housed and taught, and graduate nurses?

The definition and organization of medical social service.

To what extent should the hospital undertake the vocational and social guidance of the convalescent?

What are the economic and social reasons against the housing of hospital workers in hospital dormitories?

Can large numbers of the sick be properly fed from a central kitchen?

To what extent are mechanical aids to ventilation useful in hospital practice?

Under what conditions should steam be used for heating in preference to hot water?

To what extent should various classes of hospital workers be safeguarded against disease by protective inoculation?

By what means, whether of construction or administration, may the spread of disease in hospitals and dispensaries be prevented or minimized?

In what respects does foreign hospital practice differ from American, and what are the merits and demerits of the respective systems?

Few hospital superintendents will claim to have mastered all of these questions, and yet it is in this broad field of study and investigation

that the key to hospital progress is to be found. The situation calls for the creation of a center or centers of study where opportunity may be afforded to men, already grounded in medicine, to acquire a knowledge of the history of organized medical endeavor, of sanitation and hygiene, of sociology, of law and legislation, of business and accounting, of domestic science, of hospital architecture, and of the principles of heating, lighting, and ventilation; where, furthermore, by direct contact with capable hospital administration, they may gain facility in dealing with every-day problems; and last and most important, where, under competent direction, they may learn to analyze the crucial problems of medical administration. Those who undertake the teaching of medical administration will necessarily spend a large part of their time during the first decade in learning to formulate its problems. Like all important teaching centers, the school for hospital superintendents, yet to be established, will accomplish its most important results in the field of research.

# GARDENING AS AN OCCUPATION FOR TUBERCULOUS PATIENTS

By JOHN I. PINKNEY, Assistant Superintendent, State Sanitarium, Wallum Lake, R. I.

IN so far as is possible, the surroundings and atmosphere of an institution for tuberculous patients should be bright and cheerful. The patients are practically isolated from society and friends. From the nature of their disease, they lead a quiet and sedentary life, and it becomes a matter of great importance that their environment be made as pleasant as possible.

We have been able, through the medium of gardening, to improve the appearance of our grounds, supply the institution with cut flowers and many fresh vegetables, and at the same time to furnish employment to many of our patients. This work diverts their thoughts from themselves and their symptoms and gives them some pleasure. Incidentally, they gain a little knowledge that will perhaps be of some use to them after leaving the sanatorium. Gardening at Wallum Lake has long since passed the experimental stage, having been introduced as a part of the graded work and exercise system in the early days of the institution.

There was no arable land on the sanatorium property in 1905, except a little immediately surrounding the buildings. That year the patients were put to clearing the wood from the land, which had not been cultivated in a great many years and which was then covered by a young growth of hard wood. Part of the chopping was

Fig. 1. A view of the hospital grounds in their original state before the landscape gardener waved the magic wand which worked the transformation shown in Fig. 4.

done by employees, but a few patients were allowed to chop small trees. Patients considered able to do farm work were classified as to their ability to chop, mow brush, carry brush, dig roots, hoe in the garden, etc. They were graded as to the length of time spent at work. All these patients commenced with twenty minutes' work, which, in as many cases as possible, was gradually increased to two hours, the maximum required. All patients on the exercise list were required to do farm work, including the women, who picked vegetables and did the lighter work. While some objected to farm work, the numbers were not much greater than those who objected to doing any work about the sanatorium. In all, about ten acres of land were cleared in this way and today constitute the sanatorium garden.

Fig. 2. The first stage of improvement consisted of the removal of the scrubby pine trees root and branch and of the *débris* incident to building operations.

As soon as the land was ready to plant, it was divided into small gardens, and each patient was encouraged to plant some one thing, the whole constituting a well balanced vegetable garden, suitable to the requirements of the institution. This method was found to be impracticable; so many patients lost their enthusiasm when the weeds began to grow, and still others, their interest when they realized they would probably leave the institution before harvesting time, that voluntary labor in the individual garden patches was abandoned. Compulsory labor on a common garden was substituted, and this method has proved entirely satisfactory.

## Garden a Profit to the State

The amount of work done by the patients and the results obtained have naturally varied from year to year, depending on the season, the kind of crops raised, and the number of patients considered fit for this kind of work. In the aggregate, aside from raising a good part of the fresh vegetables used in the institution, an average yearly profit to the state of $168 has been achieved. While the amount may seem small, it must be remembered that the

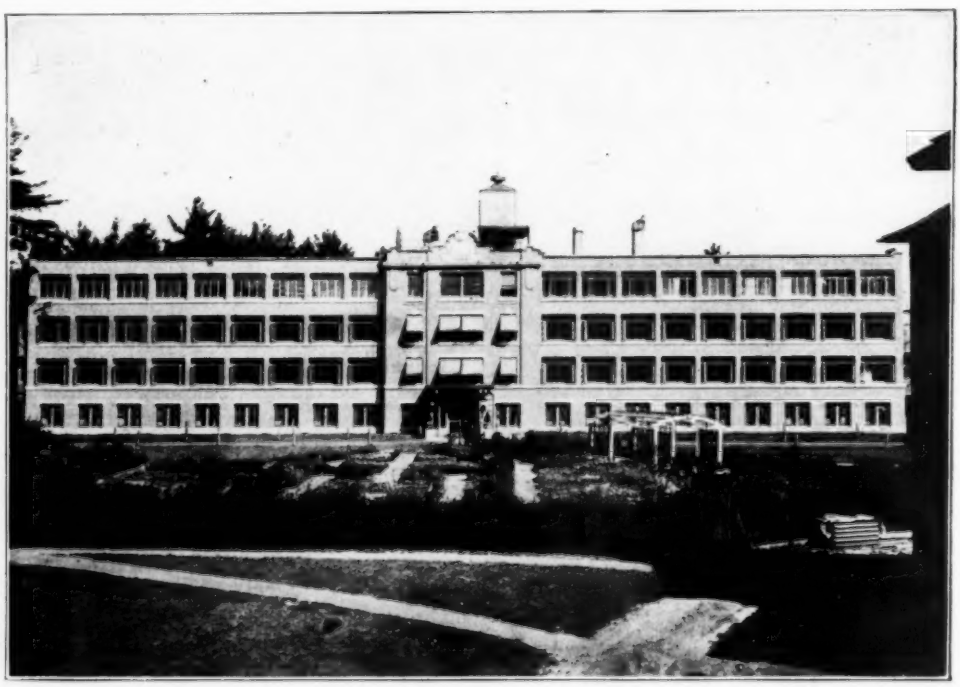


Fig. 3. Dispensing with the barbed wire fence and its posts enlarged the perspective, and the laying out of the formal garden and winding paths followed in natural sequence.

ground planted had first to be reclaimed, and reclaimed land is necessarily rough and expensive to till. The land was also run out, and the amount of fertilizer that had to be used was a big factor in keeping the amount of the profit down. A big item of profit that can not be estimated in dollars and cents is the satisfaction of having an abundant supply of fresh vegetables from your own garden. If you have had the pleasure of eating such vegetables and comparing them with vegetables picked in some one's else garden, shipped to the wholesale market and thence to you, several days later, you can appreciate the difference.

Fig. 4. This beauty spot which is visible from the windows of the Service Building was reclaimed from the pine forest, flowers now replacing the unsightly stumps and stones.

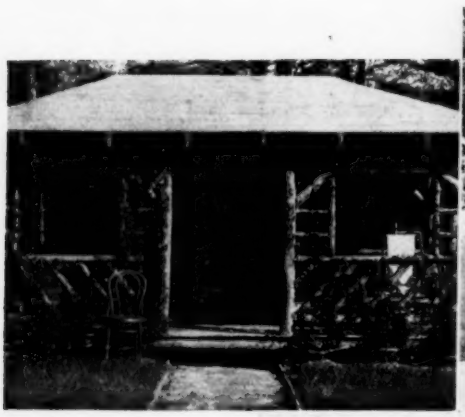
In 1917 it was deemed advisable to concentrate our efforts on the improvement of our grounds in the immediate vicinity of the sanatorium and hospital buildings. This decision was largely influenced by the opening of the new hospital to care for far-advanced cases of tuberculosis. Another fact influencing us was that in spite of our numbers having increased threefold since 1907, the physical condition of our patients was of such a standard that the number of patients considered able to do farm work was no longer sufficient to care for the vegetable garden with the increased demands upon it, and to give any attention to the growing of flowers. With the coming of the new hospital, we considered a flower garden necessary. A gardener was therefore hired to look after the vegetable garden, and the work, aside from the picking of vegetables for daily consumption and aiding in the harvesting of vegetables for winter use, was largely done by the employees. Up to this time, little or nothing had been done in the way of flower gardening. The institution buildings, with the exception of the new building, were surrounded with particularly fine lawns which served our purpose admirably as long as the great majority of our patients were up and about, and able to go for walks in the surrounding woods. They could thus provide themselves with change of scenes. But with the coming of the far-advanced cases, the majority of whom were unable to leave the building, it was evident that some change of scene must be provided for them. Hence our first efforts were made in front of the hospital building. What obstacles had to be overcome and what measure of success has been

achieved may be judged from the accompanying photographs.

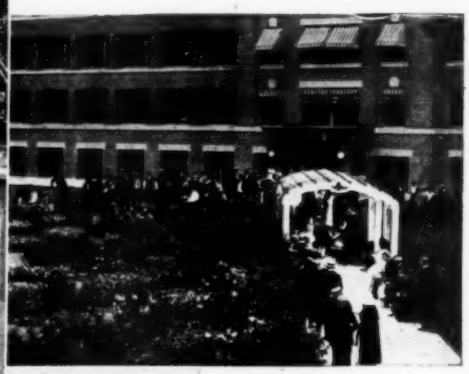
### Garden Accomplished by Patients

The present site of the hospital and garden was covered with pine trees which had to be cut down, the stumps removed, and an almost unbelievable number of stones dug out and carted away. The photograph (Fig. 1) shows the conditions before anything was done. The removal of the stumps and stones had to be done largely by employees. The laying out, planting and care of the garden has been accomplished almost entirely by the patients, the same rules governing their labor being employed as in the vegetable garden, all work being assigned and done under direct medical supervision.

The photograph (Fig. 3) gives some idea of the garden as it appeared three months after planting. It is of formal design, and in so far as possible planted with perennial plants to avoid yearly renewal, which would add materially to the cost of upkeep. Some annuals had to be used and should be continued, to aid in keeping up a perpetual bloom throughout the season. Separating the lower end of the garden from the service buildings is a lilac hedge which serves as a screen. These lilacs were dug and brought to their present places from abandoned farm house yards, of which there are a number in this community. The evergreens used were obtained in the same way from the surrounding woods and fields, and many of the shrubs are native to these parts. I mention these facts to illustrate how the cost may be kept down. In all, about thirty thousand plants and shrubs were used.



A rustic summer house flanks the arbor on the right and with its comfortable chairs furnishes a cool, shadowy place in which to spend a hot, lazy afternoon.



Labor Day was celebrated on the lawn at the sanatorium, music being furnished by an orchestra stationed in the arbor at one side of the garden.

Fig. 5. The potato patch yielding up its season's crop at the onslaught of this group of smiling patients, every member of which is revelling in the health-giving exercise.

The garden has given the patients a wonderful lot of flowers, and, with the ever changing play of color, has called forth so many favorable comments from visitors and friends of the institution that we are planning to extend the work considerably this spring. We already have about twenty thousand seedlings started in one of the unused hospital wards. A greenhouse is also being erected by the patients, one hundred feet by twenty feet, to enable us to supply the institution with potted plants and cut flowers during the winter months.

We hope to expand this work as a part of a vocational education scheme, in which we are deeply interested. That patients who know very little about gardening before coming to the sana-

torium may become so interested that they will take it up as a vocation is proved by the fact that one, at least, of our former patient-gardeners now occupies the position of assistant gardener in one of our larger eastern colleges.

Any institution using a little patient-labor can accomplish with a very little expense what has been done at Wallum Lake. One word of advice. Whether your institution already has a garden, and you are contemplating some change or addition thereto, or whether your institution has none, and you are contemplating planning some sort of garden; in either case, have a good landscape gardener prepare working drawings of your grounds, or, if the expense is found to be too great, have some one competent to judge, go over your plans before beginning work. It must be remembered, in planning and planting even the most modest grounds, that you must be able to peer into the future, anticipate many years of growth, and see the finished picture. The ultimate success of your garden will not be determined now, but in years to come. The above advice, if followed, will enable you to do a little each year, always working toward the same end, and will save the expert's fee many times over.

Fig. 6. Now instead of increasing their melancholy by looking out over a desolate waste, the patients feast their eyes on a riot of beautiful colors and the hardy perennials nod gaily to them with each passing breeze.

## RECREATION FOR STUDENT NURSES

Remembering that "all work and no play make Jack a dull boy," or Jill a dull girl, a recreation program has been undertaken by many of the hospital nursing schools in San Francisco, to provide a variety of activities and entertainment for the nurses when off duty. In one hospital where there are 130 student nurses in training, the activities are divided into athletic, musical, devotional, and literary, and the girls register for the one in which they are most interested. Swimming and dancing are most popular, with tennis, hikes, and musical clubs also having their devotees.

Once a week a recreation instructor coaches the girls in tennis, basket ball, and volley ball. On rainy days the social hall is popular with its dancing and games. A feature especially appreciated by the nurses has been a series of four dances this winter, held in private homes of the women on the Board of Managers. These gatherings are informal and the nurses may ask their own friends. In some of the nursing schools the superintendent gives an informal tea following the athletic activities, once a week.

The educational program consists of lectures and talks on subjects remote from the curriculum, and evenings given over to parliamentary drills.

# PREVENTION OF INFECTIONS IN THE HOSPITAL

By D. M. LEWIS, M.D., New Haven, Conn.

*Some valuable observations as to the causes of infections in the hospital were made by the author of this article when camp epidemiologist at Camp Custer, Mich.*

*Although antiseptics as applied to patients and to the hands of attendants handling infected patients have been long recognized as the great preventive of the spread of infection in hospitals, the possibilities of the attendants, nurses, and physicians themselves being carriers has received scant attention. Hospital authorities should see to it that attendants are free from naso-pharyngeal abnormalities and pathological lesions.*

ANTISEPTICS as applied to patients' contaminated excretions or secretions and to the hands of attendants handling infected patients have, since the day of Lister, been recognized as the one great preventive of the spread of infection in hospitals. The possibility of the attendants, nurses, orderlies, and physicians themselves as carriers giving rise to infections in the hospital has received scant, if any, attention. I have shown the irrationality of trusting the cap and gown with hair sterilization as a prevention in a nurse transferring scarlet fever, when, after discharge from a case, she is found with all the signs of being a mild missed case.[1] I further called attention during the time of epidemic poliomyelitis in 1916 that the added face masking of physicians and attendants was rational, should there be added the postulate that it was done from the point of view of not transferring infective naso-pharyngeal germs of the attendants to patients. Since that time, Weaver has called attention to the face mask as a measure mainly of protection again to the attendant. That it was, as well, a measure of protection to the patient has recently been alluded to in army literature, in the study of how hospital wards became infected. It was demonstrated that some patients acquired their secondary infection after arrival, masking methods for prevention of infection were in force I had my attention called very forcibly to the possibilities, when, after the opening of an isolation hospital, this occurred: On January 5, two nurses were reported as cases of scarlet fever; on January 10, one nurse and one hospital patient were reported, and this was repeated on January 15. During the remainder of the month, four more nurses and two more patients were reported.

In February there were five hospital attendants and four patients, in March two, and in April one. Since that time I have realized that it has not been infrequent to have cases of both scarlet fever and diphtheria given hospital patients by attendants.

### How Infections Occur

A most clear-cut example of how such infections occur came to my attention recently as camp epidemiologist at Camp Custer, Michigan. Under the commanding officer of the base hospital, all the modern methods for prevention of infection were in force and rigidly adhered to. All patients were required to be masked when not in cubicle, and all attendants were masked whenever they were in the wards, with the further provision made for them that they also sleep in cubicle system. After an occasional case of scarlet fever in December and early January, ten cases had followed after the middle of the month, and three in February.

This frequency with the appearance of cases all in different attendants' barracks and in the different wards was mainly a source of tying up personnel through quarantine, which no measures had stopped. Asked by the commanding officer to determine the source and advise any further measures of prevention, I started an investigation from two points of view, procuring first, the names of all close personal friends as obtained from each case; second, a list of all the base hospital personnel who had been patients in the hospital since the "flu" epidemic, with any illness respiratory in type. I found that the respiratory infections of that personnel were higher [illegible] for any other organization in the camp, none [illegible] a rate in excess of 300 until the middle of December, almost immediately after the "flu." Further, that an analysis of the curve of the base hospital personnel rate resolved itself into one for two parts of that personnel, namely, orderlies and nurses. The accompanying illustration shows this clearly, and also shows the fact that all the cases of scarlet fever to the middle of January had been limited to the orderlies. Through the

[1] D. M. Lewis, M.D.:
A Laboratory Aid in the Diagnosis of Scarlet Fever, Boston Med. and Surg. Jour., February 1, 1917.
Lessons from the Past and Possibilities for the Future, New York Med. Jour., May 19, 1917.

list of personal friends of those on the sick list, I found an orderly whose history of sore throat and gland enlargement was the only one suggestive of being a missed case. The data disclosed the fact that the only friend in common with all but one of the cases through January 10, and, further, a common friend of three cases during the following two weeks, had been transferred to the quartermaster's corps, following a few days' stay in the hospital. This explained the apparent disappearance of the disease among the orderlies, and the appearance among the rest of the personnel.

The remaining ten cases after the middle of January centered mainly around the probability of infection by an attendant at the Red Cross, which does not pertain to the article. The lesser three hospital cases as bed cases must have had their infection given them within the hospital. Two of these could be dismissed as not true scarlet fever, both showing nothing but a toxic rash immediately following thoracotomy, with the absence of throat signs or others. The remaining one with definite throat and tongue led me to examine the attendants of the ward. Of the five orderlies there were two definite nasal carriers, though neither showed the very constant scarlet fever tongue of carriers. Cultures showed that one had 50 per cent hemolytic streptococci, the other 100 per cent.

### Masking Attendants Effective

There was then apparent the effectiveness of masking attendants who, unmasked, could give their fellow workers the disease. This was again evident in following the nurses' respiratory curve, on which stands out in the continuance of diphtheria and diphtheria carriers the fact that no case of the disease was given to any hospital patient. This one point I recommended to the commanding officer as the important measure not included in the hospital technic; naso-pharyngeal abnormalities with inflammatory lesions unmasked were a source of disease outside the hospital and directly (in this instance) of non-effectiveness of personnel, not only from cases of dis-

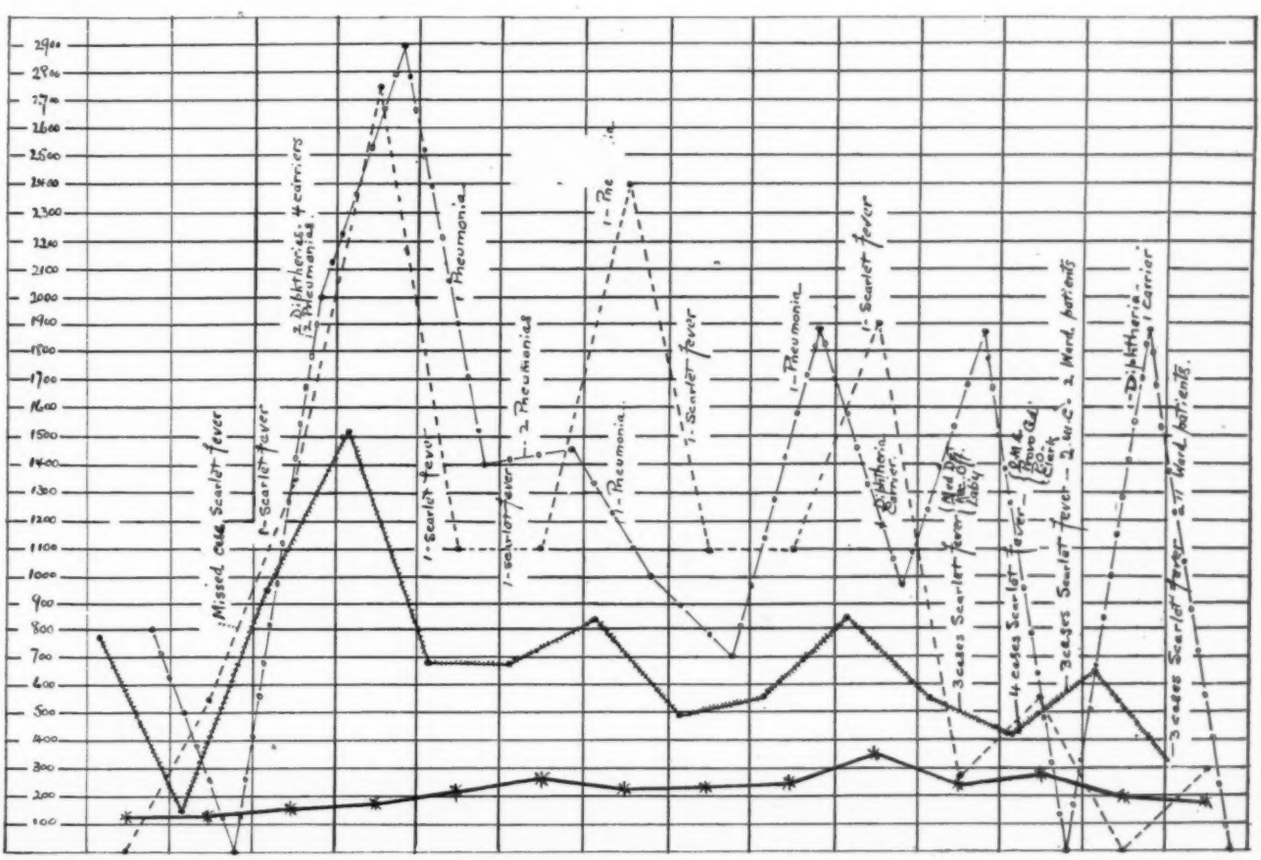
DIAGRAM SHOWING WEEKLY RATES OF RESPIRATORY DISEASES AND HOW INFECTIONS OCCURRED AT CAMP CUSTER, MICH.

Weekly rates of respiratory diseases of:

(a) Total Camp
(b) Base Hospital
(c) Orderlies
(d) Nurses

Average Strength of Organization by Months

| | Nov. | Dec. | Jan. |
|---|---|---|---|
| Camp | 35,285 | 31,231 | 26,132 |
| Base Hospital | 1,048 | 1,020 | 963 |
| Orderlies | 298 | 302 | 296 |
| Nurses | 200 | 153 | 109 |



ease but from the numbers of personnel tied up by quarantine. Unfortunately at this time, there were government orders against operating on naso-pharyngeal abnormalities in soldiers, so that orders were then issued that all such should be locally treated, and that in the future no hospital patient should be discharged until all naso-pharyngeal pathology had subsided. Two weeks later there were three further cases in the utilities and provost guard of the base hospital, all of them contacts of two missed cases of camp utilities men who were treated at their infirmary, transferred to the hospital personnel, and found desquamating when the three cases occurred. Otherwise scarlet fever infection disappeared from the hospital.

Irrespective then of whether the hospital does or does not have so-called contagious disease wards from which it is presumed attendants pick up carriership, there is this one point of responsibility with hospital authorities, a responsibility to attendants themselves and to patients, that all such attendants shall be free from naso-pharyngeal abnormalities and pathological lesions as not only being the possible carriers of respiratory diseases, but as being made carriers unwittingly from outside sources. Masking such individuals is but part of true prevention.

Study of pneumonia carriers in children in civil life has shown me a problem exactly analogous to diphtheria and scarlet fever. It would seem that a similar interpretation may be read into the pneumonia frequency in nurses on the illustration.

# THE DOLL ETERNAL

By MARY HAMMOND BARKER, Supervisor of Kindergartens, Worcester, Mass.

WHAT a heap of good the period of conservation during the war has done us all. It taught many of us not to struggle for things on the other side of the fence but to dig diligently in our own garden plot. The old New England custom, "rip it up, wash it and press it," has proven not a bad inheritance. We all have a laudable pride in our grandmother's achievements along this line.

Do you remember the story published in "Life" years ago of an untimely surprise party given to a country minister? The merry parishioners arrived at the moment the little son had wrapped a braided rag mat about his small body, as his mother needed his pants for a pattern. The frugal wife had laid the minister's second best trousers on the table and stood meditating, scissors in hand, when a loud knock came and the surprise party began.

The war conservation movement taught us not only how well we, like our grandmothers, could manage by making the most of what we had, but also how excellently well we could fashion substitutes for articles heretofore considered indispensable. This is manifestly so in the case of dolls and toys.

## The Doll Eternal

The doll is an universal toy, it antidates recorded history. Dolls have been found in Egyptian tombs that belonged to little girls thousands of years ago. It is the modern child who suffers from the commercial doll, that spiritless creature turned out by the thousands in some

Fig. 1. Mammies and Tar Babies are among other interesting specimens made from gloves and stockings. The jaunty sailor boy at the top is made with spools, with feet and hands of white pearl buttons. The tops of a pair of blue sox make the sailor suit.

Fig. 2. A raging, rampant creature made by stuffing the foot of a child's black stocking, and annexing legs and tail. Green calico eyes and whiskers—straws from a whisk broom—add the artistic touch.

factory. With her ready-made smile and ready-made clothes she lacks poetry and possibilities.

### Clara Hazel

To the casual observer Clara Hazel (Fig. 3) may look uninteresting. But just put the pattern of this plain old-fashioned rag baby down by a little girl, with some bits of cloth and pair of scissors and see what happens. Using a pattern is not quite easy for a little child. So, show them how to pin it on to the cloth—then away they go. Do not be fussy as to methods of sewing. Children under six years of age are seldom dismayed over raw edges. Possibly they will sew the edges over and over and stuff the doll with anything, from cotton batting to wood or cork sawdust, bran or sand. At the age of six or seven finish in a product does not appeal. The achievement of the toy is the joyous thing. The little pattern of dress, bloomers, and sunbonnet made from a circle will all be attempted later. I have seen this doll made of brown paper and stuffed with paper scraps, the result of an afternoon's work on a train by a child who had become travel-weary. I have seen hundreds made of fine cloth with lovely dresses and hand-painted faces ready to send this last Christmas to the children in France. This was the work of the Boston Public School kindergartens.

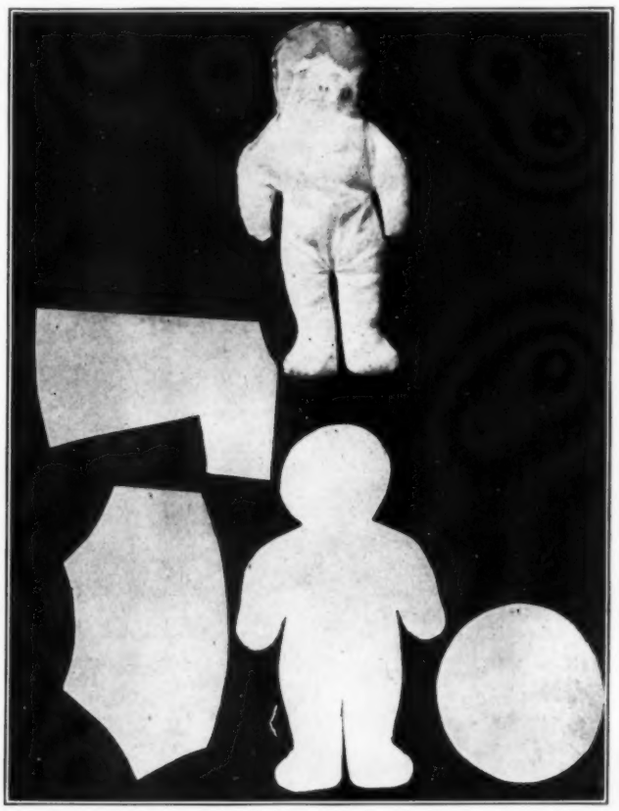


Fig. 3. Clara Hazel, the plain, old-fashioned rag baby, may be made with cloth or paper. The pattern given is for dress, bloomers, and sunbonnet made from a circle.

Fig. 4. String, worsted, and corn broom dolls ranged from the rakish looking doll on the upper left, to the demure clothes brush nurses standing in front.

### Dolls of Any Conceivable Material

Recently it was proposed to present some aspects of the project method of instruction to the first-grade teachers in Worcester, Mass. Classes of forty or so teachers were formed. Toy making along conservation lines was one of the main topics. Each teacher was asked to make over night a doll using only odds and ends. Nothing was to be bought, and the only other restriction was that the class keep within the limits of material available for any child. This elementary doll making was the cause of much invention and clever use of every day materials, in fact, waste materials. Each teacher arrived the following day feeling she had a unique product only to find thirty-nine others in her class had produced a doll equally unique and totally different. Here is a partial list of household utensils and materials used by one class of first grade teachers: gloves, stockings, clothes-pins, tin baking-powder can, dish-mop, clothes-brush, vegetables, nuts, fruits, tennis ball, golf ball, tin funnel, bottles, twine, worsteds, stick of wood, kitchen spoon, towel, stiff paper, newspaper, paper bags, and pipes.

String, worsted, and corn broom dolls ranged from the rakish looking doll in Figure 4, to the demure clothes brush nurses who stand at the

front. Much to my surprise the nature dolls (Fig. 5) did not show up well before the camera. The stiff little lady at the right is made of Indian sweet grass. She has a wealth of hair as you may see by the braid at her back. Her head is capped with a hat made of an oak leaf and trimmed with a bunch of bitter-sweet berries.

Stocking and glove dolls (Fig. 1) showed many black stocking Mammies and Tar Babies. The jaunty sailor boy at the top is made of spools with feet and hands of white pearl buttons. His sailor suit is composed of the tops of a man's blue socks.

The ladies in Fig. 6 are not beautiful but may be classed as unique. The leaky hot-water bag made a hugable rubber baby. The severe person who stands guard over her is made of a stick of firewood. Her newspaper petticoat has a neat apron of waxed paper over it. The remarkable wrinkled potato face seems to have the expression sometimes seen on a wise old rat. In Figure 2 there is a raging, ramping creature who was brought in by a teacher who was always original. You will discover in a second that the cat is only the foot of a child's black cotton stocking stuffed. Legs and tail are annexed. The artistic touch is the green calico eyes; straws from a whisk broom make the whiskers. Of course these first grade teachers had a larger stock of materials to select from, because they were living in their homes, than nurses in training would have.

The junior nurses in the Worcester City Hospital a year or so ago, fell into sad disgrace over just this matter. They were told to bring into class the next day a rag doll. The conditions were: nothing new must be used in the dolls' make-up or any materials of any value, also it must be so light a sick child could hold it. Result —some fine dolls but a shortage of napkins and towels reported by the house matron. In an interview the girls stated to the matron that they must produce dolls made of waste materials, and that the table napkins supplied them were nearer total delapidation than anything else they could discover in the institution.

* * * *

Why are we leading those who have charge of children, mothers, teachers, and nurses to abandon machine-made toys and surround the child with materials that shall incite him to create his own toys? In short, to place the child in a laboratory, a position where he will adjust, re-create, add to, take away, change, manipulate. The psychology is this: the child has a race instinct for manipulation. Man is a created being, expressing himself with every known material and substance. It is this instinct, powerfully pushed

Fig. 5. A group of nature dolls. The little lady at the right is made of sweet Indian grass and has a luxuriant braid of hair. She wears a picture hat made of an oak leaf and trimmed with a bunch of bitter-sweet berries.

Fig. 6. A leaky hot-water bag made a hugable rubber baby. The severe person beside her is made of a stick of firewood with a potato for the head. Her newspaper petticoat has a neat apron of waxed paper over it.

by need or necessity, that has given us every invention that has been produced since man began to walk upright on the face of the earth. Encouraging this instinct in the child leads to the development of creative ability, initiative, and independence of thought, the final result of which is self-realization.

### Child's Instinct for Manipulation

We find that the average city child has not had the opportunity in the last two generations to manipulate material. He has been discovered, upon examination, to be lacking in ideas and skill of hand. It is not all the fault of the public school. The larger part is due to the living conditions of the average city child. The crowded tenement house, the sidewalk playground, the frail Christmas toys bought ready made, have all limited his desire for self-expression. Then the home frequently lacks both insight into the needs of little children to express themselves in hand work, and appreciation of their crude efforts. As for the teacher, she is discovering that handwork or projects lead to more thinking than books, that well presented subject matter suggests illustration in the way of handwork with materials easily obtained in the home of the average child. Once the children discover that in what we used to call lessons and now call projects they can set their own goal, choose their own material and method, they no longer need to be pushed—they are off on the wings of the morning. This brings about cooperation between the teacher and the pupil that is the finest result of all.

Concentration, skill, and originality, as well as satisfaction from the productivity of their efforts are to be summed up as gain in this new school method. To the district nurse, I would say, use your creative power and never leave a little sick child without a toy or doll if there is a stick of wood and a rag in the house to wrap around it—the child's imagination will do the beautifying.

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# RURAL HOSPITAL ORGANIZATION

By J. W. PETTIT, M.D., Medical Director, Ottawa Tuberculosis Colony, Ottawa, Ill.

THE most serious defects of the hospital of today can be traced to the unbusinesslike foundation upon which it rests. The evolution of the hospital began in the poorhouse. As time passed and medical science progressed, one and another poorhouse feature was discarded until today we have an entirely different institution, bearing none of the earmarks of its progenitor except one—it is still the dispenser of charity. This has been and still is regarded as an indispensable feature and its chief corner stone. The charity feature made the hospital of the present possible, but is now the one great obstacle to its further progress. It is the last link which binds the modern hospital to that of the past. Until this link is broken the modern hospital cannot be conducted on business principles and until it is conducted as a business enterprise it cannot attain its highest degree of usefulness. Hence, we must modernize the economics of the hospital just as we have its appointments and service. It is

*Is the charity feature of the hospital of the present the one great obstacle to its progress?*

*In the past the chief difficulty in rural communities has been, not in securing funds to build and equip hospitals, but in obtaining funds for their maintenance.*

*Would demanding payment for every patient admitted to the rural hospitals, place them on a firm business basis?*

*Can the hospital function essentially as a business enterprise and rely upon charity organization societies to assume financial responsibility for the hospital care of the poor?*

the charity feature of hospital management which breaks it down as a business enterprise and until relieved of this burden it will always be a community beggar.

When the hospital was an exclusive charity and so understood, its needs were met on this basis: every community doing as much or as little as it deemed necessary. With the advent of the pay patient it became partly a business and partly a charity institution. As the hospital has become more popular the disproportion between charity and pay patients has grown greater and greater until now the majority are admitted as pay patients.

The hospital field in this country is the broadest and most promising and yet the least developed and most poorly organized of any of our public institutions. The medical side of the hospital has been fairly well developed, but the business side is about as bad as it can well be and maintain an existence. The writer's plea is to place these institutions on a sound business basis

and all the blessings which the hospital is designed to bring will follow. This can only be done by making its support *absolutely independent of charitable contributions.* It should be regarded as a public utility and be put upon the same business basis as public service companies. These are not dispensers of charity. How long would they properly function if they should make the attempt.

### Pay for Every Patient Admitted

The plan proposed is to separate the hospital from charity by demanding pay for every patient admitted—those who can afford it to pay for themselves; those who cannot to be paid by an organization or organizations whose special function is to dispense charity. In order to protect the deserving poor from injustice and protect the hospital from imposition it should be understood that every acute or emergency case must be received without delay and that as soon as practicable the financial standing of every doubtful patient should be determined by the proper charity organization, and if indigent, the organization charged with the responsibility of caring for the patient assume payment of the hospital fee.

The chief difficulty in conducting the rural hospital is in securing proper financial support. This is due principally to the constant drag of the charity patient. Relieve the hospital of this burden and it can be conducted on business principles, making it unnecessary to be constantly dragooning the community for funds to keep it going. Its accommodations can be substantially on the same basis as now—private rooms for those able to pay and wards for those supported by charity. It should be conducted with the avowed purpose of making a profit on private patients, the earnings to be used for the betterment of the hospital itself. Such a plan will take the hospital out of the pauper class and make it a self-supporting business concern which will deserve and command the support of the public on its merits. It must not be assumed that this plan contemplates leaving the care of the deserving poor to chance. Practically every community has charity organizations already in existence which can assume responsibility for this class. If not, a special organization can be brought into existence. This will insure the care of the deserving poor, because this will be the special function of the organization, but will also protect the hospital and public from imposition by those social parasites who are willing to accept hospital service without ever intending to pay for it, but who are too proud to accept aid from a strictly charitable organization.

The plan proposed will simplify the management by doing away with the numerous governing bodies which seem to be necessary under the present system to secure the financial support of a large number of people. These numerous governing bodies are a serious handicap to the business management of the institution. Hospital authorities have accepted the maxim that "Much management is always bad management." In other words, when the hospital is relieved of the meddlesome interference of its multiple managing boards (its fool friends) it will fall into the hands of experienced hospital managers who will not only give it a better business administration, but will be alive to the progressive demands of the modern hospital, of which those now in control have no proper conception. It will place the hospital on a business footing where, with good management, it will be self-supporting. It will offer an inducement for public-spirited citizens to contribute funds for building and equipping hospitals and simplify their management by placing them in the hands of fewer people.

The average hospital does not command the confidence of business men, for the reason that they feel it is not conducted in a businesslike manner. They do not know what is wrong, but believe that the contributions they are called upon to make are not wisely expended. They give sparingly and even grudgingly. Those responsible for the management may be good business men but find themselves handicapped by a vicious system in which the fundamental error is in attempting to conduct a business enterprise on a charity basis—two elements which are almost as difficult to mix as oil and water. All, or at least most, of the evils of hospital management can be traced back to this fundamental error. But little difficulty is experienced in securing funds to build hospitals where the need exists. The difficulty is in maintaining them. Divorce the hospital absolutely from charity, conduct it as a business enterprise, and it will not only sustain itself but earn enough to provide for future development. The original investment in buildings and equipment, with just sufficient assistance to make it a going concern, will be all the financial aid it will ever need, if relieved of the burden of dispensing charity, with all its attendant evils.

### Present Methods Extravagant

The present methods are not only loose but extravagant. It is safe to say that under the present system, if an accounting were made on a strictly business basis, it would be found that it is costing more to maintain charity patients than is necessary for the maintenance of private pa-

tients if the business administration were what it should be. It is little short of a tragedy to see large sums of money invested in badly located, extravagantly constructed buildings, irrationally equipped by well meaning people who do not realize that the hospital is a medical and business institution requiring the highest order of business ability for its successful operation. Well meaning persons who would hesitate to undertake the management of a bank, a manufacturing concern, or other business enterprises, do not hesitate to assume the responsibility of building, equipping, and operating a hospital, which requires quite as much ability and technical skill as any of the institutions named.

The proposed plan, while novel and untried, the writer believes is fundamentally sound. Either this or some other plan must be adopted to place the rural hospital on a better business basis if it is to attain its maximum of efficiency. Sentiment and tradition are the lodestones which will make the change a difficult one to bring about. The plan can hardly be expected to be adopted by hospitals already in existence. The plan proposed is so radical that in all probability its feasibility will have to be demonstrated by proposed hospitals rather than those already in operation.

### Must Remove Charity Feature

Any attempt to place the rural hospital on a sound economic basis by retaining the charity feature will prove futile. Relieve it of this unnecessary burden and it will be possible for the rural population to have the advantages of modern methods which the small hospital as at present conducted does not and can not afford. If it is the business of the community to maintain hospital accommodations for charity patients (and it certainly is), the rational and business-like thing to do is to let the hospital function as a hospital, and the charity organization function as a charity organization, but do not attempt to carry out both under one organization, especially in view of the fact that their objects are diametrically opposed and can not be reconciled.

The plan proposed may or may not be applicable to the metropolitan hospital. The writer is convinced that it is applicable to the rural hospital.

# HOSPITAL STANDARDIZATION IN THE WOMAN'S HOSPITAL IN THE STATE OF NEW YORK

By GEORGE GRAY WARD, JR., M.D., F.A.C.S., Chief Surgeon, Woman's Hospital of the State of New York, Professor of Gynecology, Cornell University Medical College*

IN January, 1918, the board of governors of the Woman's Hospital, appreciating the importance of the great movement of hospital standardization that had been inaugurated by the American College of Surgeons for the betterment of hospital conditions in the interests of the patient, provided for a reorganization of the service. In order that there might be a centralization of responsibility, the board declared for a system of unification with a chief surgeon, having ample powers, at the head. This plan standardized and simplified the procedure throughout the hospital.

*By an analysis of its old organization, this hospital found that it could not attain maximum efficiency and minimum waste on account of divided authority, too large a staff, a multiplicity of independent services, failure to study end results properly, and a lack of the stimulus of teaching.*

*A reorganization of the service, which included the placing of a chief surgeon at its head and the opening of all departments to undergraduate students brought about remarkably increased efficiency.*

*The weekly conference of the entire hospital staff is found to be of inestimable value both to the members of the staff and to the patients.*

The heritage of the Woman's Hospital is a great one. It can rightfully claim to be the birthplace of gynecology, as it was founded in 1855 by Marion Sims, and is the first hospital in the world devoted to that specialty. Such names as Sims, Emmett, Thomas, Peaslee, and Noeggerath as attending surgeons speak for the important contributions to science that have emanated from the hospital, and it was but natural that tradition should be the fetish that narrowed the activities of the service under the old system of organization. The former organization was a multiple one; there were five gynecological services and one obstetrical service. At one time there were as many as six

*Read at a Meeting on Hospital Standardization of the American College of Surgeons, New York, N. Y., Oct. 24, 1919.

gynecological services, the head of each being practically independent, and having the power of nominating his assistants in the hospital and out-patient department. Naturally the staff was much too large for the size of the service, and since every member of the staff had his own ideas for the pre- and post-operative care of his patients, the nurses had to attempt the impossible in carrying out, without error, the many different sets of standing orders on file in the wards. The administrative control of the service rested with the surgical board, which consisted of ten members, each with a vote. No organized teaching was done in the hospital. An analysis of the old order of organization showed that the hospital could not carry out its functions with a maximum of efficiency and a minimum of waste on account of a divided authority, too large a staff, a multiplicity of independent services, a failure to properly study end results, and the lack of the stimulus of teaching.

In February, 1918, I was put in charge as chief surgeon, with the commission to reorganize the service on a unit basis, and the by-laws were changed to effect the same. Furthermore, the governors, appreciating the importance of teaching to the progress of the hospital, opened the doors of all departments to undergraduate students. The reorganization has been planned to endeavor to fulfill the three cardinal functions of a hospital, namely,—first, and foremost,—the care and cure of the patient; second, the educational side, i.e., teaching the nurses, interns, students, and the medical profession; and third, contributing to knowledge by scientific research.

The present organization consists of but one service, which is continuous and under the control of the chief surgeon. This service is subdivided into the gynecological, obstetrical, and out-patient departments, and the special departments of pathology, urology, gastro-enterology, and radiotherapy. An historical department under an historian who has charge of the records, and a follow-up and social service system, complete the organization. The attending staff now consists of the chief and four attending surgeons on duty, one of whom is the obstetric surgeon, and five junior attending surgeons. Each special department has a head with the necessary assistants. The entire staff is subordinate to the chief surgeon, who has the power of making all nominations in all departments. He assigns the clinical material as he thinks best, and he may also use it for teaching purposes.

The gynecological department, which has 106 ward beds, is divided into four divisions, each under the care of the chief and three attending surgeons. A junior attending surgeon is assigned for work in each division. All gynecological patients who enter the wards of the hospital from the out-patient department, or by reference, are assigned to the divisions in rotation for diagnostic study, and a report of the provisional diagnosis must be sent to the chief's office as soon as possible and not later than forty-eight hours. The cases are then reassigned to the staff for operation or treatment in accordance with their particular interest, if deemed advisable.

The obstetric department has twenty-five ward beds and is under the care of the obstetrical member of the staff with a junior attending surgeon to assist.

The out-patient department is under the supervision of one of the junior attending surgeons, who is responsible to the chief for the proper conduct of the department. There are six clinics, each having two sessions a week, so that there is a morning and afternoon clinic each day. The chiefs of each clinic, who have the title of adjunct assistant surgeon, have the necessary assistants. During the summer months, when the junior attending staff act as attending surgeons, these adjunct assistants come into the hospital as acting junior attendings, and thus have an opportunity to develop and show their worth in the operating rooms and in the wards.

The special departments of urology, gastro-enterology, and radiotherapy each hold two clinics a week during which they make the necessary studies on the cases referred from the wards or the out-patient department.

The house staff has been reorganized to conform to the new conditions and to provide a well balanced service, insuring each intern work in every department. There is a paid resident gynecologist who is in control of the entire intern staff and is held responsible for their discipline and work. He is in charge of all private patients and assists with these cases. The obstetrical service is also in the care of a paid resident. The service of the paid residents is indeterminate and may continue as long as their work is satisfactory. The intern staff proper comprises two divisions, each consisting of a house surgeon, with a senior and junior assistant. Their service is for one year and they serve in each position for four months. Each junior assistant serves two months in the obstetric department, as we believe a man will be better prepared for gynecological work if he has had special obstetrical training. The two divisions exchange services every two months so that each intern is given the opportunity to work with all the attending staff.

One of the requirements that has been in-

stituted is that a thorough, careful, and complete preoperative study must be made of every patient. In order to allow this, the average stay of a patient in the wards before operation is from three to four days. In addition to the history and complete physical examination, a blood examination, including a Wassermann test, blood pressure, smears, and urine analysis must be made and recorded, and, if indicated, the patient must be referred to the special clinics for further study.

The attending surgeons have two operative clinics each during the week and they have two operating rooms at their disposal. Each attending surgeon has a follow-up clinic every week, which he must attend in person. Codman's "end result" card is used and a stenographer is in attendance. Uniform rules for the revisits and for the duration of observation of the various types of cases are in force.

A staff conference is held once a week throughout nine months of the year which the entire hospital staff is always expected to attend. These conferences last about one hour and the medical public is welcome. The order of procedure is as follows: Presentation by the pathologists of the pathological material of interest which has been obtained during the week; the gross and microscopical specimens are demonstrated, together with brief talks on the pathology. The casualties of the service are next called for. Each attending surgeon must report any deaths, infections, or complications occurring during the week in patients under his care, and an endeavor is made to locate the cause. The details as shown by the case histories, and the testimony of those concerned are carefully analysed in order that it may be determined, as far as possible, whether the fault lay with the doctor, the patient, the disease, or the hospital organization or equipment. A report on the analysis of the follow-up clinic of one of the attending surgeons is next made. Each of the four attending have such a clinic once a week, which they must attend in person, and once in four weeks they are required to make an analysis of the results of the cases they have seen since their previous report. This analysis must show the total number of cases seen in the clinic and the number of those which have previously been reported. The remainder which are to be reported are classified according to the results as successful, partially successful, and failures. The acid test for the determination of the result is whether the patient has been relieved of the symptoms for which she sought relief, and not whether the operative result is satisfactory to the surgeon. The successful cases are disregarded, while each partially successful case and failure must be analysed in detail and the reasons given for the classification. A free discussion is encouraged in order that the operating surgeon may have every opportunity to defend his position. Cases that may have been previously reported as successful which may later have become partially successful or failures, must be subsequently reported again with their revised classification. Next a report of some case of special interest is made by one of the attending surgeons in turn. Thus an opportunity is given to present case histories or to show patients, which have had successful results. Frequently a case presenting difficulties in diagnosis or treatment is shown and the advice of the conference is sought. Once each month the junior attending surgeons are required, in turn, to give a brief summary of the recent gynecological and obstetrical literature, or to give a report on any hospital or operative clinic they have visited. Such problems as may relate to technic, operating rooms, sterilizing rooms, and wards are brought forward for general discussion when necessary, in order that the various points of view may be obtained. A stenographer is present during the conferences who makes complete records of the proceedings, which are kept on file in the office of the chief surgeon.

During the last six months period the data taken from the clinical records of the gynecological department and brought before the staff for review (as disclosed in the monthly follow-up analyses which are required of each attending surgeon) showed that a total of 1,166 cases were reported. Five hundred and thirty-two of these had been previously presented to the conference and classified. Of the remaining 634 cases, four were non-operative and twenty-four were radium cases for malignancy and undetermined as to the result, leaving 606 operative cases. Of these, 487 were classified as successful in relieving the patients of symptoms for which relief was sought, 97 as partially successful, and 22 as failures. Therefore, the percentages in our operative cases were as follows: successful, 80 1/3 per cent; partially successful, 16 per cent; failures, 3 2/3 per cent.

In a period of nine months, in 1,388 operations in both clean and pus cases, 63 had infections in the operative wounds, or about 4½ per cent. In other words, we obtained 95½ per cent of primary union in the healing of wounds in all cases. The mortality for all cases in 1918 was 1.9 per cent, and in 1919 was the same. As an example of the effect of the reorganization on the follow-up clinics, the percentage of returns has increased over 100 per cent.

I think I may say it is the unanimous opinion of the staff that these conferences are of inestimable value and profit to all concerned and there can be no question but that they have produced a marked effect in improving the pre- and postoperative study of our patients, with the inevitable benefit to them. No man on the staff can afford to have careless work shown up in the strong light of the publicity and criticism of such conferences, and no man can object to a system which applies with equal force to every operator in the hospital. The interest in the meetings by the staff is very great. One of the members stated that it was the best "Medical Society" of all that he attends.

While standardization and simplification of routine hospital procedures have been established, the individuality and initiative of the members of the attending staff have not been hampered, and they have been encouraged to utilize to the utmost their ideas in research and technic.

All the staff, both seniors and juniors in every department, are expected to make some study as a contribution to the literature during the year. If a particular type of case is desired by any member of the staff for the purpose of clinical research, he may state his desire and object and such cases will be assigned to him in quantity sufficient for his purposes, but he must present his results for publication in the Annual Surgical Report of the hospital, which is made up of these scientific contributions. To facilitate this important work, I have established a library in the hospital with the latest editions of the standard text books, and periodicals on gynecology and obstetrics, through the generosity of the board of governors, and they have also provided the services of a medical artist.

The surgical report for 1919, recently published, contains twenty monographs contributed by the staff, and three theses by undergraduate, fourth-year students of the Cornell University Medical College, as part of their work at the hospital. Among the clinical research problems studied during the year from the hospital records published in this report, are studies on uterine curettage, ectopic gestation, uterine fibroids, salpingostomy, postoperative urinary retention, the relation of appendicitis to adnexal disease, and postoperative vomiting.

One of the most difficult problems of the nursing department of a hospital with a large attending staff, is the proper carrying out of the numerous and varied pre- and postoperative standing orders. These orders, which are kept on file in the wards, usually are compiled without any thought as to whether they conflict with the meal hours or other essential scheduled routine ward work. Their multiplicity and variance are so confusing as to greatly increase the chance of error, and with the constant rotation of pupil nurses, can never be satisfactorily enforced. The ideal plan is to have but one set of standardized orders which are as simple as is consistent with common sense, and which are adjusted to the time schedule of the ward routine. One set of orders means a saving of time and energy for the nurses and interns and reduces the chance of error to a minimum, with resulting benefit to the patients and economy to the hospital. They also greatly facilitate teaching. We have compiled and put in practice in the gynecological wards such a set of standardized orders, and after a thorough trial they have proved most satisfactory. We have also prepared a set of orders for use in the recovery ward. Simplicity and clearness were the objects aimed at in their compilation, and the judgment of the head nurses in charge of the wards was the guide as to their practicability, in the endeavor to make them as "fool-proof" as possible.

The technic of the operating rooms has also been standardized. The methods of hand sterilization have been systematized and made uniform, and the several steps of the procedures have been then typewritten, framed, and placed over each scrub-up basin for guidance, with a convenient sandglass to insure that the required time is spent in this important process. Likewise, the technic for the preparation of the fields of operation has been similarly systematized, and placed in each preparation room.

Simplification of procedure as accomplished by standardization of methods greatly facilitates the imparting of knowledge to the student in such a form, as to avoid confusion and complexity, and favors its retention. Consequently I have standardized the technic of the usual gynecological operations and I endeavor to carry out each step of the procedures in a uniform way in my clinics. Thus the interns and nurses rapidly learn the technic of each operation, and their value as assistants is proportionately increased. When the surgeon has no order or system in his method of operating, the patients' interests are jeopardized. I have had illustrations made of each step of these standardized operations and use the stereomotorgraph to show lantern slides of the same while executing them, so that the observers are enabled to follow each step accurately. I have standardized the arrangement on the operating trays of those instruments which are in most constant use. Each instrument on the tray must be kept in its proper location by the suture nurse

throughout the operation. When the operator takes one from the tray, she must substitute its duplicate at once, so that the surgeon always finds the same instrument in the same place, and confusion and waste of time is avoided. The upper part of the tray is used for the discard; the suture nurse watches the tray and not the operation, so that her duties are greatly simplified. It is, therefore, only necessary to ask for some special instrument. Lists of the instruments required for each type of operation have been made, so that there is an avoidance of wear and tear on a great number of unneeded ones which would otherwise have been unnecessarily prepared.

A description of the technic of each standardized operation is kept on file in the record room, so that in the dictation of the operator to the stenographer, much time and work is saved, as it is only necessary to give the nature of the operative procedures, and stating that the standard technic was used. If any deviations are necessary, owing to the pathological conditions present, the same are described in the dictation. This method of standardizing the technic of operations and instruments and dictation applies only to my clinic. The other surgeons are at liberty to use any operative technic that they desire, and they are free to choose what operative measures or treatment they deem best in their own clinics.

The need of a special department for the study of associated gastro-enterological conditions in gynecological cases was very evident and we have just established such a department with a complete, up-to-date equipment. I feel sure that the more complete diagnoses that this department will make possible will prove of inestimable benefit to our patients.

The establishment of a department of x-ray-therapy is also now under way, and it will be of especial value in treating certain gynecological conditions that are not amenable to operative procedures.

How best to solve the difficult problem of taking the private patient's history has been given careful consideration and we have now in force regulations that provide for the taking of all such histories by the resident gynecologist, unless objected to by the surgeon in charge or by the patient, in which case the surgeon must himself furnish the history for filing with the records of the case.

What I have just presented is but an outline of the general reorganization that we have been carrying out during the past eighteen months. So much yet remains to be done that I feel that we have only scratched the surface of our opportunities. Many problems need attention in the immediate future. The forms of our case histories and out-patient department records are under revision. The devising of a suitable obstetrical follow-up system is also in hand.

One of our greatest needs is properly qualified young men who desire to specialize in gynecology. The opportunity for those seeking to enter this field is unusual at this time. At the Woman's Hospital the path leading to a position on the attending staff is well blazed for the serious minded and capable man; and the entrance door is situated in the out-patient department and is wide open.

The reorganization and constructive work that we have been endeavoring to put in force has been no light task, and it would not have been possible to accomplish what we have were it not for the hearty support of the board of governors and the cooperation of the surgical staff. To them, my sincere thanks are due for their aid, and I am encouraged to hope for greater improvement in the future.

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## OHIO HOSPITALS TO GIVE ANNUAL REPORT

The Ohio State Department of Health has issued an annual report form to every hospital in the state on which to report its work during the year 1919. The form was adopted with the active cooperation of a committee of three hospital representatives of Ohio, the committee composed of Dr. A. R. Warner, Executive Secretary, The American Hospital Association, Dr. A. C. Bachmeyer, superintendent, Cincinnati General Hospital, and Dr. M. H. Cherrington, part owner of Cherrington Hospital, Logan, O. The report was accepted by the Department of Health's Hospital Bureau, and by the Ohio Hospital Association. A bill creating the Hospital Bureau Department of Health was passed at the last session of the Ohio legislature, and the bureau was empowered to investigate, study, and to require registration and reports from all Ohio hospitals.

## THE OHIO VALLEY GENERAL BULLETIN

The Ohio Valley General Hospital, Wheeling, W. Va., publishes an interesting bi-monthly bulletin concerning the progress of the institution, for the information of its friends in the community and elsewhere. The bulletin is attractively gotten up, consisting of ten to fifteen pages, with a cover on which appears a picture of the hospital, the head of a pretty nurse, and the inscription "For the people—by the people. Guest house of the sick." The background of the cover appears in a different color for each issue, green, blue, lavender, or yellow. The bulletin is edited and published by the directors of the hospital association, and the expense of publication is defrayed by friends of the hospital.

Articles on subjects such as the Stores Department, with illustrations showing typical daily food requisitions, kitchen orders, and views of the storeroom, the School for Nurses, the Dietetic Department, the X-Ray and Laboratory Departments, have appeared in recent issues.

The MODERN HOSPITAL

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## ARE HOSPITAL EMPLOYEES JUSTIFIED IN STRIKING?

THE orderlies employed in the hospitals in New York City have organized a local union which has sought and secured affiliation with the American Federation of Labor. This local union has demanded that the hospitals recognize it, abstain from employing non-union orderlies, and immediately grant a large increase in wages. This development is somewhat disconcerting, but scarcely to be regarded as altogether unexpected. Groups of nurses in England and also in America have formed unions as a means of promoting their economic and social welfare. Even members of the faculty of one of our leading theological seminaries have formed a labor union and affiliated with the American Federation of Labor. Hospitals are not monasteries, set apart from the general trend of the world's activities, but are a vital part of those activities and are bound to be influenced by the movements of the day. The employment problems in the hospital are basically much the same as the employment problems of industry and commerce. The formation of a union of hospital orderlies in these days of collective bargaining is, therefore, not greatly to be wondered at, nor is it to be deprecated. Hospital employees, as employees, cannot be classed apart, let us say, from the employees of hotels, which render somewhat similar service, and have the same right to organize for the advancement of their welfare.

Their welfare needs to be advanced. The wages of hospital employees are in many instances far from what they ought to be, and not infrequently their working conditions are atrocious. Trustees, and even superintendents, burdened with the task of raising funds, and often meeting with small success in their campaigns, are content to let hospital employees get along as best they can on inadequate wages. Yet hospital employees have no magical means of making one dollar, with a purchasing power reduced one-half, do the work of two.

But while we concede the right of hospital employees to organize for the advancement of their welfare, we do not think they are justified in using the strike as a means of attaining their ends. The strike is economically wasteful and ethically wrong. Destructive as are its results when used as an instrument of coercion in industrial disputes, influencing adversely every fiber of our industrial organism, its results, if used in disputes over labor conditions in hospitals, would, to put it mildly, be appalling. One does not need to possess an active imagination to realize this. Other means of settling wage and other disputes in hospitals can and must be found. They are being found in industry; the public will not long tolerate their not being discovered and applied in hospitals. The boys' and men's clothing industry has found an orderly means of adjusting disputes through its Joint National Council, formed by representatives of the manufacturers and the unions. The printing trades have found an orderly means for adjusting disputes through the International Joint Conference Council of the Allied Printing Trades. The employers and workers of printing firms which do from 70 to 75 per cent of the book, periodical, and job printing business of the United States have created legislative machinery designed to care for the affairs of this trade on a national scale in such a way as to eliminate the strike, with its chaos and anarchy. Similar tendencies may be seen in the national economic organization of the stove founders, and in Great Britain in the creation of the Whitley Councils, and the unofficial organization of basic industries.

Should the movement for the union of hospital employees spread far and wide, hospital statesmanship will have to cope with the situation much as industrial statesmanship is now doing, with increasing success, in the employment problems of industry. For the present, the situation may be

met locally in New York by the establishment of such working and living conditions among hospital employees as will make the strike unnecessary. The character of these working and living conditions should be determined not altogether by the hospitals, but, as in the case of the clothing, printing, and stove manufacturing industries, by a joint council composed of representatives both of the hospitals and of the union, in this case a union of hospital orderlies.

## FINANCING THE COMMUNITY HOSPITAL

Not every one will agree with the proposals presented in Dr. Pettit's article on page 7 of this issue for handling the financial problems of our hospitals, particularly our small community hospitals. But what he says on this subject is stimulating and worth some serious thought. Although, historically, hospitals had their rise in charity and benevolence, we are now fast coming to place the emphasis more and more on health rather than charity in our institutions of healing. Some, therefore, like Dr. Pettit, would have hospitals devote all of their resources to the prevention of disease and the healing of sickness, unhampered by the burden of providing funds in one way or another to cover the cost of the care and treatment of their indigent patients. Dr. Pettit would not by any means deny such patients care and treatment in the hospital, but he would have the hospital and community so organized that all of the work done in the hospital would be paid for, if not by the patients, then by some other agency, be that agency the state or one of its political units, a lodge, a local church, or a charity organization society. In many small communities where the funds of both the hospital and the charity organization society are supplied by the same small coterie of charitably inclined individuals, the bills for the charity work of the community, whether they be incurred by the hospital or by the charity organization society would, we fear, be paid by the same individuals, but out of different pockets, so to speak.

## A TOOTH MORE PRECIOUS THAN A DIAMOND

When Cervantes had Don Quixote exclaim after an unfortunate event in which he lost a number of teeth, "Alas, a tooth is more precious than a diamond," he was undoubtedly indulging in a humorous exaggeration; but, in the light of preventive medicine of today, we can hardly regard his exclamation as an exaggeration. Teeth are more precious than diamonds, and he would be a fool who would swap his thirty-two teeth for a like number of diamonds, whatever their carat.

Investigation shows that 90 per cent of our school children have one or more decayed teeth and that 20 per cent of all the teeth of school children are in a more or less serious state of decay. This is a grave national indictment in view of the progress that scientific medicine has made in recent years and in view of the fact that dental caries, its cause being well known, is theoretically preventable. When, however, hospitals, especially those for children, inaugurate clinics to care for the dental needs of their in and out-patients, we regard it as a matter of real encouragement.

The importance of the dental clinic in the hospital is becoming increasingly recognized. We earnestly hope that in the near future many forward looking hospitals, not yet equipped with dental clinics, will begin to lay their plans to install dental clinics, and that progress along this line of socialized medicine and hygiene, checked by the war and its tremendous expenses, will grow apace. Hospitals, like schools, can carry the work on wholesale and, therefore, at relatively less expense than it can be done by the private practitioners; for this reason they should make every effort to render this public service.

Some day—and let us hope the day will not long be deferred—we as a nation will spend the initial forty or fifty million dollars needed to put the teeth of our children in order and the additional thirty or forty millions annually to keep them in order. It will be one of the best investments the nation ever made. It will save many millions more and will add richly to our national health and efficiency.

## DISHONEST MERCHANDISE

INDUSTRIAL dishonesty is to be condemned in any instance, but when it finds its way into the manufacture of clinical thermometers it is to be doubly condemned, and in no uncertain terms. Words fail us in the characterization of manufacturers who thus attempt to swell their profit by jeopardizing health, and even life itself.

That clinical thermometers faulty in workmanship and false in the records they give were being placed on the market in great quantities, was first brought to our attention during the war. Thousands of worthless thermometers were shipped by manufacturers to foreign countries, and when we entered the war similar worthless thermometers were offered to our Navy, our Army, and the American Red Cross. When this abominable business was discovered, France and

Great Britain passed laws prohibiting the importation of clinical thermometers that had not first passed official laboratory tests. Our Army and Navy and the American Red Cross in their turns made similar provisions. These laws, however, pertained only to military use and fought the evil at the point of consumption. It left it uncontrolled at its source—the point of manufacture.

We know of one state at least that has enacted laws that beard the lion in his own den and prohibit the manufacture and sale of clinical thermometers that fail to meet the standards established by the State Bureau of Standards. This is the state of Massachusetts.

And what is even more encouraging is that these laws have been vigilantly and vigorously enforced. The result is a decidedly improved situation. In several instances manufacturers who could not and would not correct their careless and criminal methods of manufacture have been denied the license to sell clinical thermometers in that state.

Reputable hospitals have always taken whatever steps lay in their power to insure the efficiency of the clinical thermometers they use. But the means of establishing the quality of a clinical thermometer is often inadequate. Hospitals generally should urge upon the legislatures of their several states the enactment of laws for the certification of clinical thermometers and the provision of adequate machinery of enforcement under energetic executive control.

## Appointed Surgeon General

DR. HUGH S. CUMMING has received the appointment as Surgeon General of the United States Public Health Service, to succeed Dr. Rupert Blue.

Dr. Cumming was born at Hampton, Va., August 17, 1869. He was graduated in medicine from the University of Virginia in 1894. On May 25 of the same year he was commissioned as assistant surgeon, passed assistant surgeon five years later, attained promotion to surgeon March 15, 1911, of senior surgeon November 8, 1918, and was appointed Assistant Surgeon General March 6, 1919.

For a number of year Dr. Cumming was quarantine officer at Hampton Roads. Most of his work during his quarter of a century of service has been spent in quarantine work. At the time of his appointment he was in Naples, fighting typhus, and it will be some weeks before his work in that city, Constantinople, and Paris can be completed.

Dr. Cumming takes the position as chief executive of the United States Public Health Service at a time when the issues are more pressing and the work more exacting than ever before. The difficult tasks which the Department faces at this time include the rehabilitation of the thousands of soldiers who contracted tuberculosis during the Great War, and of the soldiers incapacitated mentally or suffering from nervous disorders as a result of their overseas experience. The ravages of the two succeeding influenza epidemics are to be combatted, and means evolved through research for the control of succeeding waves of this disease.

Preventive medicine is to be brought to the fore and the increasing demand of medical agencies for Federal leadership call for reorganization of the service to meet the standard of a new era in public health.

## MORE THAN MEDICINE

Among the army recruits, a well-directed campaign against homesickness makes a "man" out of many a "boob." It makes good fighters also out of "boobs." The campaign of the army is not for sentimental reasons, but it is born of necessity, for the army needs fighters. The army knows that a stream of water will flow along a channel if it is directed into the channel. It knows that human nature is much like water in this particular. The right start of the soldier is the important thing.

When the recruit arrives at camp he is treated "like a man" and given a good meal. The daily routine of army life is explained to him and then he is kept busy. The entire program is designed to prevent homesickness, for homesickness causes

discontent, and discontent makes poor soldiers. A busy man is rarely homesick. The army, out of experience, knows this and plans accordingly.

Civil hospitals have much the same problem to meet. Here as well as in the army comes discontent, and discontent makes poor fighters. It makes poor fighters against disease. Do we plan accordingly? Nostalgia is often the real reason for the restless, complaining patient who does not do well, who does not fight disease well. In the business of fighting disease, mental tranquility is a big factor. Every doctor knows how worry can retard a cure and almost out of habit the doctor tells his patient not to worry. We all have seen the baby, to whom medicine was of no avail, pick up and gain when it got "mothering." A little of the same prescription benefits many grown-ups. But, as a matter of fact, in civil hospitals, aside from the brief instruction of "not to worry," little is done to prevent worry or homesickness or a habit of complaining. There is no campaign against these ailments.

The average patient stays at the hospital about seventeen days. For at least ten of these days his mind and hands are capable of being busy. Is the patient neglected if he is not busy? Is there a lesson for us in the experience of the army?

Is it worth while to occupy the patients' idle time with instruction? Would it "pay" to provide instruction sheets and to have recitations in the hospital on matters of personal hygiene, public health, and the duties of a citizen to the community? Would it be worth while to employ a teacher for patients to carry on this work? The problem belongs to psycho-therapy, which is inseparable from good medical care and good hospital service.

## CULTIVATING THE READING HABIT

ONE of the foremost hospital superintendents of this country, in talking recently with us, quite unconsciously revealed what we believe to be one of the biggest elements in his success. He had acquired the habit of purposeful reading and sought, on every occasion, to make a practical application of the ideas that seemed to him would make for progress and efficiency. As he could find no time during the day to read, he invariably spent his evenings at it and seldom retired before midnight. Nor did he confine himself solely to current hospital literature. He read the better medical journals and general magazines as well as carefully selected general literature, devoting especial attention to economics and sociology.

We cite this superintendent, not because we wish to commend his practice of invariably keeping late hours, but because we wish to emphasize the necessity of cultivating sound habits of reading and study on the part of hospital superintendents as a means of keeping abreast of the times, and of bringing an enriched personality to their work.

The superintendent who depends wholly on his own limited experience and allows the details of his work so far to engross his attention as to leave no time for reading is bound to narrow his outlook, limit his usefulness, and stay the progress of his institution. But the superintendent who reads will be quick to sense the trend of the times and make, with profit, such changes and adjustments from time to time in the methods and scope of the work of his institution, as will keep it to the forefront of progress. He will often be saved the embarrassment of belated action and of entering upon ventures unwise, because untimely.

"Reading," indeed, "maketh a full man," and the superintendent who reads is usually the superintendent with a good stock of ideas for use in his own hospital. The reading of a single evening may carry a suggestion which, applied, saves the hospital a large sum of money or enables some piece of work to be done more efficiently.

Not the least advantage to be derived from this excellent habit is mental alertness. To read purposefully is to think actively and, in the midst of the multitude of problems that arise in the hospital daily, where is the superintendent that can dispose with alertness?

Finally, reading enables the superintendent not only to be *in* the world but *of* it. The well informed superintendent is a superintendent whose board of trustees will hold him in high esteem and whose society will be sought because it is worth while and stimulating. The war and the remarkable events that cluster about it and are emanating from it, have brought us in closer touch with peoples and countries the world over, and the superintendent needs to keep in touch with these developments, which have an influence, however slight, upon him and the work in which he is engaged.

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Life hath no blessing like an earnest friend; than treasured wealth more precious, than the power of monarchs, and the people's loud applause.—Euripides.

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He who has a thousand friends
Has not a friend to spare,
While he who has one enemy
Shall meet him everywhere.—Emerson.

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We are most of us very lonely in this world; you who have any who love you, cling to them and thank God.—Thackeray.

# INCREASING THE EFFICIENCY OF HOSPITAL ADMINISTRATION

By AARON WALDHEIM, President, Jewish Hospital, St. Louis, Mo.

While hospitals date back almost to the Middle Ages, no marked improvement, either in their building or operation, has been evident until comparatively recent years, about the middle of the last century.

From that time on, however, they have steadily progressed, both in construction and administration. The part they play today in the care of the sick and in the advancement of medical science depends entirely upon three principal qualifications: first, their efficiency; second, their equipment; third, their capacity. Of these three the first is by far of greatest importance, although I do not underestimate the value and need of the other two.

The state of efficiency depends entirely upon the organization in control of the hospital, while the board of directors, which has charge of the finances, is responsible for its equipment and capacity.

## Hospital Organization

Hospital organization is constructed along lines similar to our own government. The three distinct bodies which control its destinies are: the board of directors, which is the legislative; the superintendent, who is the executive; and the medical, represented by the staff, in place of the judicial.

As I have just stated, these bodies are distinct, and, I regret to say, often remain so to the detriment of the institution. There is a lack of cooperation among them which is vitally necessary to thorough efficiency. Often we find that the needs of the medical department are not discussed with the superintendent or board. The board enacts measures without the advice of the staff or superintendent, or the superintendent comes to conclusions without consulting those directly interested.

To overcome this weakness in our own organization, the Jewish Hospital, and to bring about harmony of action, which is essential to the development of any institution, we organized an efficiency committee. This name, I am pleased to say, has not been a misnomer, and has added materially to the efficiency of the hospital. The committee is composed of three members of the board, three of the staff, and the superintendent. All matters of importance pertaining to the operation and needs of the hospital are referred to it. For instance, it passes upon all rules governing the house staff, the operating rooms, and the keeping of records. It considers the purchase of new equipment, charges for x-ray and pathological work; and, in fact, everything that tends toward the betterment of the hospital and its service. However, in order not to usurp any of the power of the board or staff, the committee acts only in an advisory capacity. It has no authority to carry its decision into effect. These decisions must be referred to the staff or board for final action, where they are almost always readily approved. The committee has harmonized the various interests in our hospital and has added materially to whatever advancement the hospital has achieved. Prompted by the success of this movement, we went a step further, and from time to time hold joint meetings of all the members of the staff and board of directors, together with the heads of the different departments of the hospital. These meetings have been most interesting and of great benefit to the hospital. I believe, too, that hospitals in the various communities should form an organization and hold meetings from time to time to interchange ideas, and thus establish unity of action in matters of local importance.

## Importance of Discipline

Another important matter to be considered in the conduct of an efficient hospital is discipline. Discipline must be thorough, and must pervade the entire organization. It must apply to the visiting as well as to the house staff; to the graduate nurses as well as to the pupil nurses. Even the menial help must be subject to its strict though kindly enforcement, for there is nothing that so quickly renders an organization inefficient, as a lack of proper discipline. Its custodian is the superintendent, upon whose shoulders rests much that makes or unmakes an institution. The superintendent not only must maintain discipline, but must strictly and impartially enforce all rules, for laxity and partiality are microbes that strike at the very vitals of an organization. The superintendent must see to it that no preference is shown staff physicians over outside physicians, except as prescribed under the rules of the hospital; that favors are extended alike to friends and strangers, and equal privileges accorded to all.

Some time ago, a good friend of our institution asked the superintendent to give special care to a certain patient. Her reply was, "All our patients receive special care." This was the only proper answer that could have been given. It emphasized the fact that the institution was doing all it could for every one entrusted to its care; that it could do more for no one; that it would not do less for any one, and that the best it had to offer was ever at the service of all who entered its doors. I also recall that one of our directors, whose son was a patient in the hospital, came to me and asked to be allowed some special privileges on account of his connection with the hospital. I informed him that he should be the last one to make such a request; that if the directors themselves did not live up to the rules, how could he expect others to do so? I mention these incidents simply to illustrate the necessity of absolute impartiality in the conduct of a hospital. It elevates the standing of the institution and inspires confidence in all connected with the organization, as well as in the patients themselves. A hospital operated upon any other basis is undeserving of public patronage and support.

While those in charge of a hospital must be firm in its administration, at the same time they must also be kind and courteous to all with whom they come in contact. Kindness is not an indication of weakness. And especially must every courtesy be extended to patients. Some one should be delegated to call upon them from time to time to inquire as to their health and comfort and to see if they are receiving proper attention. Patients are sure to appreciate this attention and, in addition, it will afford the superintendent an opportunity of knowing and correcting evils of which it would be difficult to learn in any other way.

## Strict Economy Aid to Efficiency

The practice of strict economy throughout an institution also adds to its efficiency. Inasmuch as the expenditures of most hospitals which are properly serving humanity are usually in excess of receipts, there must be a proper regard for economy and the elimination of waste, or deficits will climb and worries increase. However, economy must not be mistaken for parsimony, for parsimony is more injurious in the conduct of a hospital than waste itself.

Another matter which is vitally necessary to the proper operation and standardization of a hospital, is sufficient funds to carry on the work. New and modern equipment is constantly needed, additions and changes to buildings become necessary, and furnishings wear out and must be replaced. The sick poor within the wards must receive every care and attention, regardless of the expense it entails.

Furthermore, the mission of hospitals should no longer be confined to the care of the sick. Years ago those who dispensed charity aimed only to relieve distress; today their main purpose is to prevent poverty and distress. So, too, the time has come when hospitals must bend their efforts toward the prevention, as well as toward the cure of disease. To this end a social service department is of vital importance, and research work should be carried on to the fullest extent possible. Every new discovery in medicine and every advancement in surgery is a blessing to the human family. When this important branch of hospital work is more fully developed, I believe the public itself will become more interested in our institutions and will give them fuller support. This matter should be brought forcibly to the attention of the directors of our hospitals, most of whom are only passively interested in hospital work. I am sure it would awaken them to the wonderful possibilities that lie ahead in this line of work and secure their more active interest. How proud a hospital would feel if, through its own department, the discovery of some new cure or improved method of treating disease should emanate, and what satisfaction would be felt by those who gave to this work their active support.

### Students Should Witness Operations

I also feel that hospitals should give every assistance to those in pursuit of medical knowledge. I know that a strong prejudice exists against students witnessing the operation of patients and profiting through their illness and misfortune. However, I believe if a campaign of enlightenment on this subject were inaugurated and the public were made to realize the great benefit to posterity through privileges of this kind, the vast resources of our hospitals for teaching purposes would no longer go to waste as they do in most of them today. These matters should be given earnest consideration, for until hospitals engage in such activities their mission to humanity cannot be considered as entirely fulfilled.

The intern, too, who is seeking to improve his knowledge of medicine, must be given every assistance in order that he may accomplish this purpose. Histories which have been written by him should be carefully scanned by the doctors attending the patients and discussed with him, and history classes should be held at least once a week.

Nor must we overlook the great part that hospitals play through their training schools for nurses. Here are developed those splendid Sisters of Mercy whose lives are devoted to the care of suffering humanity. The high standing of this organization has been attained through constant efforts of the hospital to improve this branch of service for which too much praise cannot be bestowed, for the trained nurse is indispensable to the practice of medicine. However, the number of young women entering our training schools today is not sufficient to meet the growing demand for trained nurses. Therefore every effort should be made to increase their number. This can be done to a large extent by affording to pupil nurses attractive and comfortable living quarters, and proper amusements and social activities.

In conclusion, I want to say that I sincerely hope the part hospitals play in the communities will ever increase and that their efforts will not be confined alone to those who seek care within their walls, but will be extended to benefit all humanity.

## TRAINING FOR HOSPITAL SOCIAL SERVICE

By JOHN E. RANSOM, Superintendent, Michael Reese Dispensary, Chicago.*

Hardly a more serious problem confronts the hospitals of America today than that of obtaining an adequate number of adequately trained social workers. The fact that there are many hospitals in the land which are unaware of the existence of this problem adds to rather than diminishes its seriousness.

No more important question confronts hospital social workers as a group, or, may we say, as a profession, than that of working out a program of education which will give broad, and, at the same time, specific training to the hospital social workers of tomorrow, and which will give to hospital work such standing that it will come to be recognized as a profession and not as an occupation open to anyone who wishes to work at it.

There is today a dearth of well-trained and capable directors of social service departments and of other workers in those departments. This shortage is accentuated by the demands of the Red Cross and other organizations of national scope whose levies upon the medical social service field have been so heavy as to seriously handicap that service in many institutions. The number of social service departments in hospitals and dispensaries as well as the number of workers needed in already established departments is rapidly increasing. Many hospital authorities and members of the medical profession who have been uninterested, unfriendly, or antagonistic to social service are coming to see its value and to recognize it as essential to efficient medical service. The American Hospital Association has given official recognition to hospital social service by devoting one of the sections, into which its program is divided, to this phase of hospital work.

### Resolutions Adopted

At the 1918 convention of that body the following resolution was adopted:

"*Resolved*, That the American Hospital Association express a recognition of a general need of a large number of women to supervise hospital social service work, who shall have the advantages of training in a university in preparation for such work; that the essential elements in such an education are (1) general educational, (2) medical, (3) sociologic; and that this work be so combined as to make a university course of reasonable length; and be it further

*Resolved*, That the executive secretary shall send copies of this resolution to such universities as do now give courses in philanthropy and sociology, and to any other universities contemplating the establishment of such courses."

Complying with this resolution copies of it with an accompanying letter were sent to a selected list of American and Canadian universities and colleges. Replies were received from twenty-one of these. Some merely acknowledged the receipt of the resolution. Most of them expressed interest in the problem. Some wrote of specific plans of work already in operation or to be inaugurated.

*Read at the Twenty-first Annual Convention of the American Hospital Association, Cincinnati, Ohio, September 8-12, 1919.

A professor of social economics in a western university wrote in part as follows:

"I was very glad indeed to note the tenor of this resolution. In this university we have for some time worked toward a course which should train women in hospital social service work. At the present time, in cooperation with the superintendent of our University Hospital, we are at work upon a more definite scheme of education to cover the points named in your resolution."

### Hospital Social Service Courses

The Pennsylvania School of Social Service, the Boston School of Social Work, and Smith College gave brief descriptions of the courses they offer in preparation for hospital social service.

In the opinon of the writer, Miss Kingsbury, professor of social economy and social research in Bryn Mawr College, summarized the problem most admirably and suggested its solution. "We are giving at this College," says Miss Kingsbury, "specialized work relating to hospital social service along the lines you suggested except the medical courses. . . . I believe that some arrangement should be made between such a department as ours and the medical colleges so that the proper kind of medical training and nursing training should be given to the student preparing for hospital social service. So far, we have given the sociological and technical courses (giving the student practice in hospital social service departments in Philadelphia) and probably as satisfactorily as anywhere else, but personally I do not feel satisfied with this course and believe that only by some cooperation with the medical colleges and hospitals can we hope to attain effective training.

### Courses Given in Universities

As already mentioned there are two or three schools of social work which in cooperation with hospitals and dispensaries are offering courses in preparation for hospital social service. Their work is the best we have today and as pioneer work in this field is of great value. The resolution called for a more comprehensive educational program, a program, however, which it seems to the writer could best be carried out in large universities having departments of sociology affording both academic and clinical or field work training and having medical schools with hospitals and dispensaries which they control. There are a number of such universities in this country. Courses could be developed in the medical school whose purpose would be to give such knowledge of medical problems and such familiarity with medical terminology as will fit the worker for intelligent cooperation with the medical staff with which she will later work. Such courses, we believe, should be worked out especially to meet the needs of the pupil social worker rather than combined with the regular curriculum of the training school for nurses. Nursing and hospital social service are or should be two separate and distinct fields, each calling for workers especially trained for the work in those fields.

### Sociological Courses

The sociological courses should aim to give the student familiarity with the underlying principles of human relationships, community organization, and the like, and a general knowledge of the field of social work. Supervised field work not only in medical social service but also with non-medical agencies should form a part of such curriculum. Briefly, the general educational part of the hospital social worker's training should be such as to give background and perspective for the special work she will have to do.

### The Social Service Department

Up to the present time hospital social service has of necessity been largely case work. Case work is and must continue to be a very vital part of the social worker's job, but too frequently the cases are so many or so baffling or so something else that we cannot see or have no time or energy left to search for the problems underlying those cases, much less to help work out means for their solution. Thus it is that often the social service department never gets to work at some of the important phases of its job. It really ought to be a force making for the socialization of the hospital, for hospitals even in those innermost parts of their beings which we call boards of trustees, medical staff, and hospital executives must come to realize that the service they are called to render is social service in the fullest sense of that term if the hospital is to fulfill its function in the community which supports it. The social worker with vision, tact, and perserverance can do much toward bringing her hospital to this point of view. The social service department should not be a raisin in the loaf, but rather yeast. When the community relationships of the hospital are better understood and developed, the work of the medical institution will in large measure be part of an organized program for general social betterment. The service of the physician, of the hospital, of the dispensary, will not be an isolated and hence often incomplete and perhaps unsuccessful effort, but will make its full contribution because properly articulated with that of other agencies of the community each performing its special part of a complex task.

In the development of hospital community relationships, what an opportunity and responsibility will lie with hospital social service. Are we not all agreed that for the work that lies ahead and at hand for hospital social workers, there is needed the best training obtainable?

## UNIVERSITY FACES QUESTION OF HOSPITAL EXPANSION

That the time has come when the university must face decisively the question of hospital expansion in the medical school is the poinion of Dr. Burton, who recently resigned as president of the University of Minnesota to become president of the University of Michigan, expressed in his report for the year ending July 30, 1919, recently made public. He says that experience with full time teaching has shown some interesting results; that any plan which entirely prevents a clinical professor in the Medical School from practising his profession is unwise; and that plans must be developed, and facilities must be provided so that a member of the medical faculty may give his chief time and interest to his educational work, and still have opportunity for a limited amount of private and consulting practice.

In order to have full time clinical teachers, hospitals must be provided in which private patients of the members of the staff together with per diem patients can be cared for. Because of the adoption of a comprehensive building plan, the state of Minnesota cannot be expected to provide hospitals for private patients even for members of the staff; therefore, by the very nature of the problem this type of hospital expansion must be provided for by private gifts.

He advocated a campaign to raise from a half to three-

quarters of a million dollars for hospital expansion with adequate housing for nurses, and care for administrative and service features. Such a hospital would be self-supporting and would make possible the carrying forward of plans already adopted in the University of Minnesota. It would hasten the development of a diagnostic clinic, and all classes of patients would receive the best of care.

## MAKING HOSPITALS FIREPROOF BY USE OF AUTOMATIC FIRE ALARMS

The thoroughly modern hospital is in the so-called "fireproof" class. Helpless patients are encouraged to believe they need fear no harm from fire. Walls of brick, concrete and steel, doors of metal, windows of fire resisting glass,—its every physical part is constructed with the one idea of making the structure safe.

But is it safe? Are those patients really secure against the fire fiend? How about the highly inflammable contents? What is there to prevent those from burning?

Men who have made a study of fire risks in all phases say it is the contents of any building that present the grave problem to fire underwriters. There lies the risk. Within the building some means must be provided to eliminate, or reduce, the fire risk to a minimum, if a hospital is to meet the requirements of humanity.

In providing the machinery for this adequate protection necessary for the modern hospital, the human element must be taken out of consideration. It has been proved many times that in a crisis mankind is fallible. The keenest, most conscientious watchman is only human. He cannot be in all parts of a great building at the same time. Neither is it practicable to have enough watchmen to guard every room and closet in a large hospital.

### Discovering Source of Blaze

Suppose fire breaks out in some part of a great building. The discovery of smoke in the halls or other rooms some time later causes a search of perhaps a dozen rooms before the source of the blaze is located. In the meantime the fire has gained great headway. The tinder-like contents of the room by this time are a mass of flames.

The fire breaks through the room in which it started. The halls and other rooms by this time are filled with stifling smoke. There are not enough attendants to remove the helpless patients. Even though the fire is brought under control before the entire building is a roaring furnace, many deaths may have been caused by the smoke in distant rooms.

This fire, like every other, was small in the beginning. A bucket of water or a hand fire extinguisher at the start would have prevented the disaster. With definite knowledge immediately that fire had broken out in that certain room, there would have been no delay in discovering and extinguishing it. There would have been no previous moments lost between the time smoke gave the alarm and the time the exact location of the blaze was discovered.

How to eliminate this hit-or-miss way of fire discovery has been a serious problem not only to hospital managements but to owners of every sort of building. But this problem has been solved at last. Infallible devices have been perfected that not only eliminate the human element in fire discovery but really exercise an almost uncanny faculty for instantly sounding the alarm and indicating the exact location of the fire. To hospital managers this assertion seems almost beyond belief. Yet it is a fact that such devices have been perfected and have been in use for years in some of the largest hospitals in the country as well as in other buildings of every description.

### Instant Alarm Automatic

One system of fire protection actually "feels" the fire the instant it starts. This "feeling" is transmitted quicker than thought to a central alarm box and annunciator. The indicator shows exactly where the fire has started. There is no lost time or lost motion at the start. The method by which this mechanism operates is simple. Around each room to be protected runs a fine copper tube 3/40 of an inch in diameter—about the size of a tiny wire. This tube connects with a diaphragm, sensitive to changes of the air pressure in the tube. Through the diaphragm the impulse is transmitted to the gongs and indicators that show exactly where the fire has started.

An open blaze immediately raises the temperature of the air in the room. The heated air rises and coming in contact with the copper tube expands the air within it and this impulse is transmitted to the sensitive diaphragm in the very minute of the outbreak of flames.

The expansion of the air in the tube is positive and almost instantaneous. There is no guess work. The principle on which this device works is as certain as the rising of the sun.

There are practically no limitations to the uses to which this device can be put. These tubes can be placed in any room or compartment where protection against fire is desired. The alarm can be transmitted to gongs placed anywhere and in addition can sound the alarm and indicate the location of the fire in any central fire station. Also indicators within the building can be attached to show at once in which room or compartment the blaze has developed. The fire discovers itself and sends for its executioner.

### False Alarms Eliminated

Although this device seems more than human in eliminating the uncertain human element, it is distinctly human in that it is able to discriminate between real fires and ordinary changes in temperature. Cold storage plants and boiler rooms in the same building can be protected. Neither is a drafty hallway in which the temperature is changing constantly a stumbling block. Safety valves that provide for ordinary changes of air pressures are provided, so that false alarms are eliminated.

No matter how obscure the place in which fire breaks out, the flames are discovered and reported at once. The mechanism always is open to inspection and can be tested at any moment day or night within a few seconds. There is no guess work; its action is positive.

In some cities building laws require that automatic fire alarms also have the manual feature so that watchmen can guard them and be sure they are working. This additional feature can be obtained in automatic alarm systems. A watchman in a few moments can test the entire fire-finding machinery of a whole building from the main halls to the most obscure room.

The fine copper tube that "feels" the fire is placed along picture molding or in any out-of-sight place so that the walls or furnishings of the most beautiful rooms or apartments are not marred or disturbed.

### Used During War

The United States Government installed automatic alarm devices in 3,000 buildings during the war, including hospitals, supply depots, and other buildings housing multitudes of human lives and millions in precious materials.

Industrial plants, steamships, department stores, cold storage plants, in fact, buildings of every kind throughout the country, are now protected by automatic fire detecting machines.

These devices are always "on the job." No matter when or where fire breaks out sensitive "feelers" detect it and immediately report it. That's why it is considered invaluable for the adequate protection of the precious lives of patients in modern hospitals who are dependent on others for their safety.

## METHOD OF PROCURING TAX FREE ALCOHOL GREATLY SIMPLIFIED

Under Internal Revenue Regulation No. 61, the method of procuring alcohol, free of tax, under title 3 of the National Prohibition Act, for use in hospitals and sanitariums, has been greatly simplified, and the purposes for which the alcohol may be used have been extended.

In order to take advantage of the new regulation, an application, addressed to the U. S. Internal Revenue, Treasury Department, must be made in quadruplicate on what is known as form 1447 for the withdrawal of alcohol, free of tax. When the hospital received this application form, on which the Internal Revenue Commissioner has placed a permit number, they will make application on what is known as form 1449 for a permit to procure alcohol, free of tax. This application is to be signed by the principal of the bond which the hospital is required to give. The Collector will then issue a permit to the institution on form 1450 for the quantity of alcohol covered by the bond of the applicant. After the permit is received it is sent to the bonded warehouse from which tax free alcohol is to be withdrawn and the quantities shipped are entered on the permit. As soon as the quantity approximates the maximum quantity called for on the permit, the holder of the permit certifies on this form as to the quantity of alcohol remaining on hand or in transit and returns form 1450 to the Internal Revenue Collector for renewal.

The application for the withdrawal of alcohol made on form 1447 must show under the proper headings the specific purposes for which the alcohol is to be used.

At the time of making the formal application, a bond known as form 1448 must be executed in duplicate in a penal sum sufficient to cover double the Internal Revenue tax on all alcohol which will at any time be on hand, in transit or unaccounted for and in no case less than $1,000 or more than $100,000.

Incorporated hospitals must file certified copies of their articles of incorporation, copies of the minutes in duplicate showing the election of officers, and two copies of the resolution authorizing one or more of such officers to sign Government papers on behalf of the corporation.

It will no longer be necessary to medicate the alcohol when used for antiseptic purposes in general, as heretofore required.

State institutions are not required to furnish form 1449 to the Internal Revenue Collector to obtain the permit known as form 1450. This has all been consolidated in the form of application known as 1444.

All permit holders are required to file a monthly return of tax free alcohol received and used during each month. This return will be of form 1451 and will be made in triplicate, one copy to be held by the permit holder and the other two copies to be forwarded to the Collector of the district.

Under Regulation 61, it will no longer be necessary for the bond and application to be signed by the president of the hospital. In the case of incorporated institutions, the application and bond may be signed by any officer duly authorized to sign and in other cases by any individual for the institution.

## GENERAL HOSPITAL PLAN FOR CLEVELAND

By C. K. MATSON, Cleveland, Ohio.

Preliminary outlines of the hospital plan for Cleveland were given recently by the director of the Cleveland Hospital and Health Survey, Dr. Haven Emerson, of New York, at the annual meeting of the Cleveland Hospital Council under which the survey is being made.

Dr. Emerson endorsed the university group plan of hospitals as a teaching center for Cleveland. This plan includes facilities for general hospital beds, for maternity service, and for babies and children. Taken in connection with the City Hospital it should be ample for all University teaching purposes.

Dr. Emerson said: "We picture the University control of hospital beds as of three kinds:

"(1) This University group under their absolute control and direction.

"(2) The control of the great majority of the beds, if not all, at the City Hospital, under the formal agreement with the Director of Public Welfare which gives the University the privilege of nominating the attending staff.

"(3) Its informal relation with other hospitals where the University finds teaching facilities in the hands of particularly well-qualified physicians and surgeons."

Speaking for the Survey, Dr. Emerson endorsed the plan for the enlargement of City Hospital, which is to be put before the voters in Cleveland in April, as follows:

"We endorse the plan of the Director of Public Welfare for an extension of the City Hospital's facilities at its present site up to a total of 1,200 beds to meet the needs of those unable to pay any part of the cost for whom there are not now beds in the privately endowed hospitals. With these increases of hospitalization and increases in other institutions proposed the city will approximate the provision of five beds per thousand of population which is recognized as the minimum provision for a metropolitan community.

"There is no institution in Cleveland that is not directly interested for its own sake in having adequate provision at the City Hospital for dependent sick, for cases of communicable disease, for chronic and convalescent cases, tuberculosis, and other cases which it is unable to accommodate itself. It behooves every hospital management to make it its business to see that the City Hospital is extended so that it may relieve the private hospital of an intolerable burden."

In constructive criticism of the present staff organization of hospitals, Dr. Emerson said:

"In view of the testimony received from the medical profession as a whole we are prepared to recommend a more democratic use of existing hospital facilities and suggest that in all general hospitals, except those used for teaching purposes mainly, a certain number of beds should be assigned for the use of non-staff physicians and surgeons, the outside physicians to whom this privilege is extended, being obliged to comply with standards of records, diagnostic measures and treatment, as well as collection of fees which would be established by the members of the responsible attending staff. The exclusive priv-

ileges now so generally enjoyed by staff physicians are in part due to the inadequate provision of general hospital beds, but are also due in part to the policy of hospitals to give preference in the use of their beds to a limited group of physicians on their staffs. Now that the public has assumed the burden of supporting the hospitals by a voluntary annual taxation, it behooves the hospital management to see that the public funds are administered in a democratic manner for the sake of public service without any taint of exploitation for the use of favored medical groups.

"It is suggested that the organizations of hospitals be in general modified to provide for representation of dispensary physicians, for the physicians having provision in the hospital but who are not members of the staff, and for the nursing profession and social workers in the hospital, who serve as an important medium of contact with the public who are receiving service."

Reports on children's and tuberculosis work are now about completed. Dr. Donald B. Armstrong of Framingham, Mass., is in charge of the study of tuberculosis.

The Hospital and Health Survey is receiving its authority from a committee appointed by the president of the Hospital Council which has direct supervision of the work. It has as its secretary, Mr. Howell Wright, the executive secretary of the Hospital Council. The Cleveland Community Fund made the provision of $50,000 for carrying on the Survey, and it will probably facilitate the carrying out of the Survey's recommendations.

## THE CONVALESCENT HOME AS A PREVENTORIUM

By FRED BRUSH, M.D., Medical Director, the Burke Foundation for Convalescents, White Plains, N. Y.

In the after-war reorganization of its activities, and those of its three hundred sources of patients, the Burke Foundation for Convalescents at White Plains, N. Y., with 300 beds, is again endeavoring to do more in the prevention of disease and disability. The following poster has been gladly accepted and placed in the principal hospitals and dispensaries of New York:

*PREVENTIVE CONVALESCENCE*

*The Burke Foundation wishes to give a larger proportion of Preventive Recuperations.*

*Send subnormal and failing persons before they break down.*

*The selection of these patients must devolve mainly upon the Dispensaries. Considerable organized effort and health-education will be needed to bring increase in this desirable cooperation.*

*Applications are made to the Foundation's City Office (preferably through your Social Service Departments) by telephone to 71 Plaza.*

* * * *

Persons with heart disease showing fatigue and irritability, and those suffering with nerve fatigue, over work, discouragement, malnutrition, possible early hyperthyroidism, pre-tubercular conditions and the like are desired increasingly for general upbuilding, which the country institution can so well accomplish.

Industrial corporations, department stores, employment and other agencies passing large numbers of people, are expected to supplement the dispensaries and welfare organizations in choosing and sending these patients, which, during the past four years, have averaged less than six per cent of the total.

Patients definitely requiring operations and sent out for preparatory upbuilding have been generally disappointing. Apparently the apprehension, plus the undermining condition calling for the operation, are the main counteractive factors; and we have come to discourage such residence in the convalescent group. "Get your operation, and then come out to us soon," has proved to be sound advice.

## SPECIAL LIBRARY CENSUS

At a time when the government is counting up its inhabitants, the Special Libraries Association is enumerating the special library collections of the country, because there does not exist at present an adequate directory of special libraries.

During the World War, when army camps and military centers were furnished with libraries for research and educational work, the men detailed to look up information for the government were hampered by the lack of a satisfactory list of information centers which they might call upon for emergency assistance. Time and again army men could have used a directory of institutions or corporations having special information which they would permit them to consult, had such a publication been in existence.

Mr. Business Man, do you realize what it means not to have a directory of manufacturers at a time when you wish to purchase a particular machine—and to have no other way to go about it? Your librarian is in just such a position when he or she is investigating a particular subject. Would it not be simpler if he or she knew of another library that had specialized on subjects of that type, and which had probably gone over the same ground.

In the spirit of co-operation, and in order to list the special information sources of the country, the Special Libraries Association—the national body of special librarians—submits the following questions and respectfully asks you to take the trouble to answer them. When compiled, directory will not be used as a mailing list for advertisers, but merely for the purpose stated, viz., to have in a central place, a record of the special information sources of the country.

A special library has been defined as—"A good working collection of information either upon a specific subject or field of activity; it may consist of general or even limited material serving the interests of a special clientele; and preferably in charge of a specialist trained in the use and application of the particular material."

If your library comes within the above qualifications the Special Libraries Association will appreciate the following information from you:

(1) Name of institution or company.
(2) Name by which library is known.
(3) Name of librarian or custodian.
(4) Can it be classified as any of the following: financial; business; legal; engineering or technical; institutional; municipal; reference; agricultural?
(5) If not, how can it be classified?
(6) Does it serve a special clientele?
(7) Would your librarian be willing to assist other special libraries to a reasonable extent?

The above data should be sent to William F. Jacob, chairman, Library Census Committee, care of General Electric Company, Schenectady, N. Y., who will be glad to answer any questions relating thereto.

A bore is a man who persists in talking about himself, when you want to talk about yourself.—Bishop Selwyn.

## ST. LUKE'S HOSPITAL OF BETHLEHEM, PA., REORGANIZES

The reorganization plan based on the recommendations of Drs. Goldwater and McCrae, recently adopted by the St. Luke's Hospital of Bethlehem, Pa., went into effect February 15. This plan contemplates the extension to the whole community, of the hospital's ministry of healing. The functions of the hospital are defined as the care of the sick in accordance with the most scientific methods of diagnosis, and the advancement of medical science and art by the controlled observation of groups of cases by qualified men.

To accomplish these aims the plan provides for a graded staff organization, and embodies, among others, the following important features:

The clinical services of the hospital will embrace departments of internal medicine and surgery, and as many of the recognized special branches of medicine and surgery as the capacity of the hospital and the availability of competent men will permit;

Parallel with the clinical departments, corresponding groups of dispensary departments, with the cooperation of an efficient laboratory, will be established;

There will be one head, whose authority is continuous, for each clinical service, and an adjunct staff of one or more assistants who shall be graded;

The hospital will be divided into two departments, one consisting of classified and graded ward service devoted to charitable and scientific work, and the other of a service for private pay patients;

Private patient service will be accessible to the reputable physicians in the community, who will constitute the auxiliary staff; and ward service will be administered only by the hospital staff;

Appointments shall continue to be made exclusively by the Board of Trustees, and no appointments shall be for a period of more than two years;

There shall be a Joint Conference Committee to determine all questions of eligibility, and to draw up lists of persons eligible for such positions as may be vacant.

The Medical Board will be made up of the heads of clinical departments, the head of the pathological laboratory, the radiologist, two delegates from the adjunct staff, and three delegates from the auxiliary staff;

The heads of clinical departments will hold equal hospital rank and will serve without pay. The right, however, is reserved to the Board of Trustees to pay a salary to any staff member when the desired grade of service cannot otherwise be obtained;

Clinical conferences will be held monthly or bi-monthly, under the direction of a committee on education, and will be open without restriction to members of the medical profession;

There will be no interference by hospital authorities between private patients and their attending physicians and surgeons. However, the right is reserved to private patients to appeal to the hospital to investigate alleged overcharges;

There shall be an approved technique in such services as obstetrics and surgery which every physician will be obliged to follow; and none shall attempt to perform any operation or special service which his previous training and experience, in the opinion of the chief of the particular department, have not fitted him to do.

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Such is the use and noble end of friendship,
To bear a part in every storm of fate,
And, by dividing, make the lighter weight.—Higgins.

## DR. ELMER E SOUTHARD OF HARVARD DIES OF PNEUMONIA

Dr. Elmer Ernest Southard of Cambridge, Mass., assistant professor of psychology at Harvard University and Bullard professor of neuropathology at the Harvard Medical School, and an eminent psychiatrist, died of pneumonia, February 8, at the Hotel Prince George, New York City.

Born in Boston, July 28, 1876, Dr. Southard attended Harvard University, receiving his A.B. degree in 1897; his M.D. degree in 1901; and an A.M. degree in 1902. He also attended Sneckberg Institute at Frankfort and the University of Heidelberg in 1902. He received the honorary degree of Doctor of Science from George Washington University in 1917.

Just before his departure and also upon his return from abroad he was an intern and assistant in pathology in the Boston City Hospital, and was later visiting pathologist in the same institution. In 1904 he became instructor of neuropathology and was an assistant professor in the Harvard Medical School.

Dr. Southard was made Bullard professor in the Harvard Medical School in 1909. From 1903 to 1909 he had been assistant physician and pathologist in Danver's State Hospital for the Insane, and since 1909 was pathologist to the Massachusetts Commission on Mental Diseases. Since 1912 he had been director of the Boston Psychopathic Hospital, and at the time of his death was a director of the Massachusetts Psychiatric Institution at Boston.

Dr. Southard was assistant editor of the *Journal of Nervous and Mental Diseases, The Psychiatric Bulletin,* and *The Journal of Clinic and Laboratory Medicine.* Among his books were "Neurosyphilis," written in collaboration with Dr. H. V. Solomon; "Shell Shock and Neuropsychiatry," and the "Weekly Research Papers," which were written in collaboration with Dr. H. E. Fernold. He contributed to many periodicals and published an account of his researches at the Danvers State Hospital for the Insane. During the war he was a Major in the Chemical Warfare Service and also chairman of the Committee on Psychiatry and Neurology of the National Research Council.

In addition to being a director of the Bedford Hills Laboratory Bureau of Social Hygiene, Dr. Southard was a member of the American Academy of Arts and Sciences, the Association of American Physicians, the Massachusetts Medical Society, the American Neurology Association, the American Association of Pathologists, the Society of Experimental Biology, the American Psychopathol Association, the New England Psychiatric Society, the Boston Society of Psychiatry and Neurology, the National Epilepsy Association, and the American Genetic Association. He was formerly president of the American Medico-Psychological Association, and at the time of his death was president of the Boston Society of Psychiatry and Neurology.

He is survived by his widow, Dr. Mabel Austin Southard, a lecturer at Wellesley College, his mother, Mrs. Martin Southard of Boston, two sons, Austin and Ordway, and a daughter, Anne.

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In the name of all you hope to know, cling close to all you know already.—Phillips Brooks.

# MEETINGS, CONVENTIONS AND CONFERENCES

## AMERICAN CONFERENCE ON HOSPITAL SERVICE MEETS AT CHICAGO

Little was accomplished at the meeting of the American Conference on Hospital Service which was held at the Congress Hotel, Chicago, on Wednesday afternoon, March 3rd. The Conference was scheduled to hold meetings on both Wednesday and Thursday, March 3rd and 4th, but owing to belated preparations and the illness of Dr. Andrew R. Warner, the vice-president, only one session was held on Wednesday afternoon. Dr. Alexander Lambert, president of the American Medical Association, presided.

It was decided to hold the next meeting at a conference in conjunction with the next annual meeting of the American Hospital Association in Montreal, October 4th to 8th, 1920, at which time it is hoped that the four committees thus far appointed would have formulated definite lines of action.

Dr. Harry E. Mock, the treasurer of the Conference, read the names of the committeemen thus far appointed to the committees which were suggested at the first meeting of the Conference held in Cincinnati in September, 1919. They follow—

### Committee on Interne Problem

John Baldy, Federation of State Medical Boards, Chicago.

Dr. Guy M. Cushing, Federation of State Medical Boards, Chicago.

Lieut.-Col. L. J. Owen, Medical Department, United States Army.

Bena M. Henderson, Children's Memorial Hospital, Chicago; National League for Nursing Education.

Rev. P. H. Mahan, Loyola Medical School, Chicago.

Wilbur Post, M.D., Chicago, Catholic Hospital Association.

E. S. Gilmore, superintendent Wesley Hospital, Chicago.

Miss Edna G. Henry, Social Service Department, Robert W. Long Hospital, Indianapolis, Ind.; American Association of Hospital Social Workers.

### Committee on Nursing Problem

Chairman, Miss Mary C. Wheeler, superintendent, Illinois Training School for Nurses.

Col. Edward D. Kramer, Medical Department, U. S. A., Washington, D. C.

Miss Louise M. Powell, N. L. N. E., University Hospital, Minneapolis, Minn.

Father Bourke, Ann Arbor, Mich.

Dr. Louise H. Burlingham, Barnes Hospital, St. Louis, Mo.

Miss Eleanor Thompson, Illinois Mental Hygiene Society, Hull House, Chicago.

Miss Antoinette Cannon, National Social Service, University of Pennsylvania Hospital, Philadelphia, Pa.

### Committee on Professional Service and Records

Col. William N. Bishhan, Medical Department, United States Army.

Miss Mary C. Wheeler, superintendent, Illinois Training School for Nurses.

B. F. McGrath, Milwaukee, Wis., Catholic Hospital Association.

Dr. Clarence Selby, Toledo, Ohio.

Asa S. Bacon, superintendent Presbyterian Hospital, Chicago.

Miss Edna G. Henry, American Association of Hospital Social Workers.

### Committee on Medical Aspects of Social Insurance

Dr. Watkins, University of Cincinnati.

Miss Minnie Ahrens, Chicago; American Nurses' Association.

Miss Elenora Thompson, Hull House, Chicago; Illinois Mental Hygiene Association.

The Rev. Father Maurice F. Griffin, Youngstown, O.; Catholic Hospital Association.

Miss Edna Foley, Assistant Managing Officer, Chicago State Hospital.

Miss Antoinette Cannon, Head Worker, Social Service Department, University of Pennsylvania Hospital, Philadelphia, Pa.

Following the announcement of these committees, correspondence between Mrs. R. W. Lovell of Boston and Dr. Arthur D. Bevan on the shortage of nurses was read. In the absence of any definite schedule of business this subject offered the Conference an interesting topic of discussion and the rest of the afternoon was devoted to it.

The trustees of the Conference met on Tuesday morning, March 4, and appointed a Committee to canvass the situation for a president. The trustees also decided to ask each of the component organizations to present a report of its work during the past year and a statement of what it regards as its special function, broadly speaking, in improving hospital service. These reports will be presented at the next meeting of the Conference in Montreal, and will be used as a foundation upon which to proceed further with the formulation of plans and policies.

## THE NATIONAL TUBERCULOSIS ASSOCIATION

The annual meeting of the National Tuberculosis Association, which is to take place in St. Louis from April 22 to 24, 1920, promises a program of unusual interest and helpfulness. The chairmen of the several sections are as follows: Clinical Section, Dr. George E. Dock,

professor of medicine at Washington University, St. Louis; Pathological Section, Dr. Eugene Opie, professor of pathology at Washington University, St. Louis; Sociological Section, Dr. H. W. Hill, executive secretary of the Minnesota Public Health Association, and president of the National Conference of Tuberculosis Secretaries; Nursing Section, temporary appointment, Miss Edna L. Foley, superintendent of the Chicago Visiting Nurse Association. The chairman of the Advisory Council is Dr. Allen W. Freeman, secretary of the State Board of Health of Ohio.

## CONFERENCE ON TRAINING OF HOSPITAL EXECUTIVES

A Conference on the Training of Hospital Superintendents was called by the Rockefeller Foundation, February 27, 1920, in New York for the purpose of considering the question of training hospital superintendents for the country.

There were present at the meeting about fifty representatives from the leading hospitals and medical schools of the country who discussed freely the problems involved.

As a result of the Conference, the representatives present resolved themselves into a voting committee and voted to ask the Rockefeller Foundation to appoint a special committee to consider the problem of the training of superintendents in all its aspects and make a report. President Vincent for the Rockefeller Foundation accepted the trust and announced that a committee would be named at an early date.

The need for training hospital superintendents arises in the demand for able hospital administrators which demand it appears can no longer be adequately met through existing methods of training. The increase in numbers of hospitals, on the one hand, and the new interest in medical administrative work growing out of war experience, on the other, have accentuated the need of considering the training of superintendents who will uphold and improve hospital administrative standards.

A recent survey by the American Medical Association gives a total of 6,440 hospitals having a capacity of 10 or more beds in the United States. Of this number 4,927 were hospitals of less than 100 beds; 817 were hospitals of from 100 to 200 beds; 447 were hospitals of from 200 to 500 beds; and 277 had over 500 beds.

Hospital superintendents may be grouped according to previous training as (1) medical superintendents, (2) lay superintendents or administrators and (3) nurse superintendents.

Specific training for hospital administration has been given in two ways: (a) through the apprenticeship method, by assistantship or experience (this comprises nearly the entire present training of administrators); and (b) courses given as optionals or to selected pupils in a number of nurse training schools, which, while embodying some theoretical work, have consisted largely of observation and practice. Distinct courses for training in hospital administration have been initiated in a very few instances.

In the Conference, the committee discussed principally the following questions:

1. Under what auspices can such instruction best be given—university, hospital, special school? (Possible advantage of affiliation of course with training school for nurses—with school of public health).
2. How can affiliation for instruction be secured with related branches—medical, public health, legal, engineering, social service?
3. What would be the value and the feasibility of short special courses or extension courses?
4. What training in general administrative procedure can be furnished?
5. What subjects should business management comprise in a proposed course for hospital administrators—accounting, purchasing, engineering, and the like?
6. Is there a demand for the non-medical executive trained to work in conjunction with, or as supplementing a medical director? Should such an executive receive the training under discussion?

## NATIONAL NURSING ASSOCIATIONS MEET

The first biennial joint convention of the National Organization for Public Health Nursing, the American Nursing Association, and the League of Nursing Education, will be held April 12 to 17, at Atlanta, Ga. An extension of the period of the convention dates to include April 9 and 10 has been advised, as four groups of specialized nurses plan to organize sections of Infant Welfare Nursing, School Nursing, Tuberculosis Nursing, and Industrial Nursing, within the national organization.

During these first two days, by-laws will be adopted, officers elected, and programs presented. The urban, town, and rural workers will meet separately in order that they may discuss issues most vital to them. Programs on problems of organization and administration will be arranged for non-professional members.

April 12, the opening day, will be devoted to registration, business sessions, and a joint opening meeting.

April 13 and 14 each association will hold separate sessions, and April 15 and 16 there will be joint section meetings.

Among important subjects to be discussed at the general meetings of the National Organization of Public Health Nursing are:

State Programs of Public Health Nursing, The Public Health Nurse, what she is and what she does.
The Desirability of Creating Divisions of Public Health Nursing within State Departments of Health.
The Public Health Nurse and Venereal Disease Control.
The Public Health Nurse and the Extension of Acute Communicable Disease, Nursing in Its Relation to General Work.
The Public Health Nurse and the Extension of Maternity Nursing.
The Public Health Nurse and Mental Hygiene.
The Public Health Nurse and Industrial Hygiene.
Rural Needs and Rural Problems.
The National Program of Health Education and Protection for School Children.
Community Organization for Health Work.
Coordination of Public and Private Agencies in the Field of Public Health Nursing.

## ROCKEFELLER FOUNDATION SUMMONS HOSPITAL SOCIAL SERVICE WORKERS

The development of hospital social service since Dr. Richard Cabat organized the first social service department in an out-patient department of the Massachusetts General Hospital in 1905, has been very rapid. Nearly two hundred hospitals throughout the country now have social service departments, and recognition of the necessity for such work in hospitals and dispensaries, is widespread. The adaptations incidental to the introduction

of this service under widely varying conditions, and the growing pressure of the work, has given rise to divergent opinions as to its scope and requirements. The lack of well defined standards by which to measure the functions of hospital social service work, its relation to hospital and dispensary administration, and the training requisite for its workers, has been felt. In order to arrive at conclusions important to constructive plans for the further progress of this service, the Rockefeller Foundation called a conference of hospital social service work, which was held February 21, at New York City. It was attended by some of the leading hospital, medical, social service and medical social service workers of the country.

### Functions, Organization and Relation

The questions discussed were the following:

1. Should the hospital social worker devote herself solely to "case work" with a view to helping the doctor in his medical analysis and in carrying out the treatment prescribed?
2. Should she interest herself in the patient from the standpoint of his general social rehabilitation as well as his medical recovery?
3. Should she assume administrative responsibility in the hospital or dispensary, as (a) general administrator, or (b) clinic secretary?
4. Is it desirable that social service should be in charge of the admission desk of the dispensary in order to secure consideration of all cases?
5. Is it better, or necessary, to consider only a smaller percentage of cases which are referred to social service?
6. How should social service be related to other parts of the hospital or dispensary—the administration, medical staff, etc.?
7. How should social service secure cooperation of relief organizations? Should administration of relief be attempted by hospital social service?
8. How can duplication of case work be avoided between hospital social service and other agencies?
9. Is there danger of duplication or of lack of differentiation of work of hospital social worker and of public health nurse?
10. What are the proper relations of hospital social workers to public health authorities in reporting disease?

### Qualifications and Training

11. Is a social or medical background the more important qualification for the hospital social worker?
12. In developing the medical background is the wisest course—
    (a) Training as a hospital nurse?
    (b) Training as a public health nurse?
    (c) General brief instruction and experience in medical procedure? (What would comprise such a course?)
13. In developing a social background is the wisest course—
    (a) Experience in regular social case work?
    (b) Instruction in a school of social work?
    (c) A combination of (a) and (b)?
14. Is there any basic training applicable equally to hospital social workers and public health nurses?
15. Under what auspices may a training course for hospital social workers best be inaugurated—hospital, social agency, university?

After this discussion Dr. Andrew D. Warner, executive secretary of the American Hospital Association, Cleveland, O., announced the offer of a gentleman whose name was not given, to finance a survey of social service work in hospitals. Those present resolved themselves into a voting body and approved the survey plan. Adjournment followed.

## METHODISTS TO EXTEND HOSPITAL WORK OF CHURCHES

A definite step in the direction of extending the work of the Church to include the hospital cause, was taken by the National Methodist Hospital Association at their second annual convention in February in Chicago. Among important topics discussed were, the White Cross Movement, the position of Protestant hospitals in Inter-Church activities, the hospital building plans of the Inter-church Movement, and the establishment of a clearing house for buying and handling all hospital material.

E. D. Samson, a member of the board of the Iowa Methodist Hospital, Des Moines, Ia., who spoke on the White Cross, defined the movement as one intended to bring to the minds of the Church-going public the essential need of contributing, not only to missionaries and educational movements, but also to the hospital cause. The White Cross campaign is conducted from the pulpit by Methodist ministers, which method has proven highly successful. Mr. Samson states that $18,500 in cash was raised for the Iowa Methodist Hospital in one Sunday campaign. Although the White Cross has been incorporated in Iowa, the articles of incorporation provide for the usage of the plan by all hospitals of Methodism.

### Inter-Church Movement

"The Relations of Methodist Hospitals to the General Conference," was the topic discussed by W. H. Jordan, Ashbury Hospital, Minneapolis, Minn., who asserted that the Inter-Church Movement has definitely undertaken the hospital cause, and will render it powerful assistance.

In corroboration of this statement, Frank Clare English, a representative of St. Luke's Hospital, Cleveland, and Superintendent, American Hospitals and Homes division, Inter-Church movement, New York, outlined preparations of the Inter-Church leaders for a campaign this spring, to raise $10,000,000 for maintenance and operation of hospitals. Another Inter-Church plan is to build at a cost of $25,400,000, the following homes and hospitals:

General hospitals in twelve states.
General hospitals for colored in twelve states.
Tuberculosis sanitarium in Arizona.
Four hospitals for incurables in four states.
Three children's orthopedic hospitals (in New York, Minnesota, and Texas).
Ten training schools for hospital executives.
Three homes for retired ministers and missionaries.
Four homes for missionaries on furlough.
Three homes for colored children.
Seven homes for aged, including one for colored.

In a talk on "Sidelights on Hospital Administration," C. W. Williams, Boston, consulting engineer, recommended the policy of non-interference between hospital boards and superintendents after a definite plan for operating the hospital had been adopted. He placed the age limit for superintendent service at seventy years. While advocating the extension of social service work in keeping track of patients, Mr. Williams urged the necessity of guarding against abuse of the hospital charity service. The policy of following up all patients for at least a year was favored by Mr. Williams.

The Association admitted the National Methodist Home

Association to membership, and voted to invite all Methodist homes for children to join. Officers elected were the following:

E. S. Gilmore, Chicago, president
F. C. English, Cleveland, first vice-president
W. A. Robinson, Cincinnati, second vice-president
W. H. Jordan, Minneapolis, re-elected secretary
C. W. Williams, Boston, third vice-president
A. B. Hestwood, Wichita, third treasurer.

The Association changed its name to "National Methodist Hospital and Homes Association."

## ACTION OF WORLD SURVEY CONFERENCE

DR. F. C. ENGLISH, director, Hospital and Home Survey, Interchurch World Movement.

At the Atlantic City Interchurch World Survey Conference, the hospitals had their presentation with the other lines of foreign and home survey.

The Conference after a thorough discussion endorsed the Burton Report, which was referred to the General Committee and finally adopted.

This report reveals the budget construction, or method of participation in the financial campaign, marked for its care and completeness.

"The action in regard to union and independent agencies was formulated according to a previous agreement made at Cleveland, Ohio, in September, 1919. They are limited to such amounts in the askings as the denominational agencies may be willing to add to their respective budgets. Hope was expressed that the way may be left open in the future for a careful and sympathetic study of such institutions, so that if there are ways in which these, which have a distinct Christian purpose, can, with the approval of all the bodies involved, be allowed to participate, this may be brought about."

Concerning philanthropic institutions the action was:

"That the budget of any philanthropic organization shall be included in the budget of the Interchurch World Movement only by first being included in the budget of a national denominational body, except that the budget of any local denominational philanthropic organization, which is approved by the denominational authority of the State Conference or other like area in which it is located. may be included in the denominational budget of that area."

This interpretation of "denominational authority" has been sent to each hospital from the Hospital Survey office:

"Denominational authority of the 'State Conference or other like area' may be secured by obtaining a letter of authorization from appropriate officer or officers having power to act, in the following list, namely:

"The president, clerk, secretary, and treasurer of an association, a conference, a presbytery, synod, or other denominational body, or

"By the bishop of a diocese, or bishop of a conference, his cabinet, or the principal officers of the conference, region, or province, or

"Authority may be secured from the officers of a Regional Denominational Forward Movement, or the officers or council of an Area Denominational Forward Movement."

The first Interchurch financial campaign is for one year only. To carry out the action of the Atlantic City conference and that of the General Committee, the Hospital and Home Department has sent out letters of authorization to all church hospitals asking that they be returned at once, so that the final budget may be completed. The Hospital and Home Department of the Interchurch is planning to go on with its work in order to complete a most thorough, scientific, personal survey of every hospital. Each hospital is to be rated by a "Norm," formulated after the most careful research and study. Unoccupied fields and most needy situations will be given special attention.

The General Committee of the Interchurch gave the following hearty approval of philanthropic institutions:

"The Conference placed upon record its unhesitating conviction that the Church of Christ should regard the founding and maintenance of agencies of philanthropy such as hospitals and homes first among its fundamental obligations. It looks forward to such development of these agencies and such assumption of denominational responsibility for them as will make it possible to present their claims for them in the largest and most inclusive way to our constituency."

## SOCIAL WORKERS TO DISCUSS PROBLEMS OF HUMAN NEED

At the forty-seventh annual meeting of the National Conference of Social Work, which will be held in New Orleans, April 14-21, leaders of social thought and work will gather to discuss the problems and methods of human betterment. The meeting is an open forum for the presentation, analysis, criticism, discussion, and evaluation of the latest social thought.

In the mornings and afternoons, section meetings will be held, dealing specifically with Children and Child Welfare, Delinquents and Correction, Health, Public Agencies and Institutions, The Family, Industrial and Economic Problems, Local Community Problems, Mental Hygiene, Organization of Social Forces, and the Uniting of Native and Foreign Born in America. Among subjects to be considered are the following: "Recent Gains in State Health Legislation," "Team Work in the Public Health Movement," "The Next Steps in Public Health Nursing," "The Physician and the Layman in Health Work," and "Special Health Problems of the Immigrant."

At the evening sessions subjects of wide general interest will be treated. The section of the conference dealing with health will hold a joint general session with the section on local community on Wednesday evening, April 21. The general subject will be the "Democratization of Health." Royal Meeker, Commissioner of Statistics, United States Department of Labor, will discuss the subject of "Standards of Living Essential to Health."

Subjects of special interest to physicians, to be presented at the conference are: "Public Institutional Care of Crippled and Deformed Children," "Leprosy and Leprosariums," a program for the "Segregation and Care of the Feeble Minded," the "Mentally Handicapped and Their Extra-Institutional Supervision and Utilization," and the "Rôle of Mental Hygiene in General Social Service."

The proceedings of the conference will be published.

"Whither, thou turbid wave?
Whither, with so much haste,
As if a thief wert thou?"

"I am the Wave of Life,
Stained with my margin's dust;
From the struggle and the strife
Of the narrow stream I fly
To the sea's immensity.
To wash from me the slime
Of the muddy banks of Time."—Tiedge.

# NURSING AND THE HOSPITAL

*Conducted by* CAROLYN E. GRAY, R.N.,
Secretary, New York State Board of Nurse Examiners,
132 E. 45th Street, New York City

## NURSING AND HEALTH ALUMNAE OF TEACHERS COLLEGE HOLDS REUNION

The Annual Reunion and Conference of Nursing and Health Alumnae of Teachers College, Columbia University, was unusually extensive and interesting this year because of the celebration of the Department's 20th anniversary. A large group of alumnae, students, and friends met on Thursday afternoon in the chapel of the College, where several addresses were given dealing with the history of the Department, and, with its contribution to nursing education and public health work. Miss Nutting's opening paper reviewed the main steps in the development of the Department's work, beginning in 1899 with the entrance of two students, and continuing to the present year with a registration of 288 full-time and part-time students. Miss Nutting thanked the many good friends who have assisted so generously in making this advancement possible, particularly acknowledging the Department's debt to Mrs. Jenkins, whose generous endowment in 1910 opened the way to the much wider expansion of recent years.

Dean Russell, speaking on "The Education of Nurses and The University," stressed the fact that nurses had "made good" in university work, that their educational standards were quite equal to those of other students and were constantly rising, that they had demonstrated their right to professional status by their scientific knowledge which they now possess, and by their power of directing their own activities along lines of highly useful public service. Dean Russell paid a warm personal tribute to Mrs. Robb and other nursing leaders whose vision of faith and enthusiasm first induced him to admit a very small group of nurses to Teachers College; he also praised Miss Nutting to whose genius, energy, and devotion he attributed the marvelous growth of the work.

Dr. Winslow, who has been a member of the staff of the Department for ten years, spoke on "The Education of Nurses for Public Health Work." Dr. Winslow believes that the public health nurse has come to be the most important factor in the public health compaign and he attributes this very largely to the social vision, energy, and personality of nurses themselves, who both as individuals and as organized groups, have persistently pushed forward the ideas of preventive medicine, and of health and education as an essential part of the nurse's work. Dr. Winslow does not agree with some health authorities who feel that this teaching work can be separated from the actual nursing care of patients. He believes, however, that the ordinary training as carried on in most hospitals is insufficient and that the nurse's educational foundations must be greatly strengthened if she is to measure up to her possibilities in public health work. The credit for the first pioneer effort in this direction, must be given to the Department of Nursing and Health, which has led the way not only in this country but in other countries in the professional preparation of nurses for the public health field.

Miss Lillian Wald of the Henry Street Settlement, speaking on "The Visiting and Teaching Nurse in the Community," emphasized the value of practical experience in this field, and the high privilege which nurses have in being able to unite with tender ministration to the sick, the most potent kind of educational force. Back of the soundest and broadest practical scientific training she felt there must be a kind of moral zeal, closely akin to the religious feeling which has always given a powerful impetus to nursing service. Referring to the International Red Cross Congress at Cannes, which she attended last summer, Miss Wald pointed out that in every proposed plan for health protection the public health nurse was the most potent factor. Countries lacking such workers are hopelessly handicapped. America has a great service to render, not only in training and sending nurses to such countries, but in working out sound and serviceable methods to be used in any part of the world.

In her paper on "The Service of The Department to Training Schools and Hospitals," Miss Sara Parsons, superintendent of nurses of the Massachusetts General Hospital, called attention to the large number of teachers and superintendents who have been trained and sent out from the college, and who have not only succeeded in building up individual nursing schools, but have also helped greatly in raising the general standards of nursing education throughout the country. Important as this contribution has been, however, Miss Parsons felt that an even greater service has been rendered to nursing schools by the unfailing advice, inspiration and criticism which they have learned to look for from the "Voice" at the College.

Before closing this part of the anniversary program, Miss Permelia Doty, president of the Nursing and Health Alumnae, on behalf of the past and present students of the department presented Miss Nutting with a check for $1,200 which was intended to serve as a token of the love and admiration of her "children" and of the very real pride which they feel in her leadership.

The plan is to make this the nucleus of an Adelaide Nutting Historical Nursing Collection, which will be housed in the college and will be available for all who wish to consult it. Although a little overcome by the quite unexpected tribute, Miss Nutting was able to say a few words about the great need for such a historical nursing collection and the intense satisfaction it would be to her to help in building it up.

A very enjoyable reception and tea followed the afternoon meeting.

At the conference next morning on "Teaching and Administration in Nursing Schools," the subjects discussed were, "How to recruit more qualified women for teaching and executive positions in hospitals," by Maud Landis, of the Connecticut Training School, New Haven; "How to increase the educational value of the practical work of pupil nurses" by Effie Taylor of the Johns Hopkins' Nursing School; "How to economize the time and energy of pupils and teachers in nursing schools" by June Ramsay, Lakeside Hospital, Cleveland; and "Some problems of state supervision of training schools" by Elizabeth Burgess, State Education Department, Albany, New York. Some of these papers will be published later. It is evident from the whole trend of thought in these papers and the discussions which followed, that the main hope of securing both graduate and pupil nurses for hospital work, lies in providing greater opportunities for individual initiative and for educational advancement, in broadening the social and intellectual life of the nurse, in reducing the present exhausting hours of service, and in providing better salaries for graduates in hospital positions.

The plan to eliminate much of the routine unskilled work now done by student nurses seems to meet with pretty general approval but further readjustments need to be made in order that the clinical experience be made more available for student nurses. A number of practical suggestions were made, among them the setting aside of a special teaching ward for beginning pupils, where they could be under constant teaching and supervision, the wider use of case histories in the teaching of nurses, more clinical teaching, and more opportunity for specialization within the third year.

Miss Burgess gave a very clear picture of the work of an inspector of nursing schools, and some of the typical problems with which she has to deal—the deplorable and discouraging lack of comprehension of what a nursing school stands for, the efforts to deceive the inspector and to evade the requirements of the law, the constantly changing and unsuitable officers in many nursing schools, and the poverty and inadequacy of many hospitals as training fields. In spite of all these difficulties, however, the field offers unlimited opportunities for helpful and constructive work in nursing education.

The need for more supervisors in Public Health work and how they should be trained was discussed by Helen Boyd. There were also talks by Miss Sutherland on a new experiment in house-to-house health instruction which is being developed in a limited district in New York by the A. I. C. P., and Naomi Deutsch spoke on the development of teaching districts for the training of Public Health Nurses.

At the luncheon of the Nursing and Health Alumnae, held in Students Hall, representatives of the various classes from 1892 to 1919 gave some account of the history of their members, and indulged in humorous and serious reminiscences of their college days. All were impressed by the wide range of activities represented by these former students, the prominent positions which many of them hold, and their solid contributions to nursing literature and to educational progress.

On Saturday morning, February 21st, the conference was opened with a very interesting paper by Dr. Kandel dealing with "Conditions of State Aid for Educational Institutions," which outlined the history and present tendencies of state aid, and indicated the lines along which efforts may be made to secure such assistance for nursing education. Miss V. May MacDonald spoke on the needs of the psychiatric field and the value of the psychiatric training for all nurses. She made a special plea for the mental nurse who is struggling to establish better conditions in the care of the mentally sick, and who is often disheartened by a lack of sympathy and recognition among general nurses. She also urged more affiliations between general and mental hospitals for the training conditions in mental hospitals which often make such affiliations impossible; and after some discussion it was decided that a small committee be formed to draft a resolution which might be sent to the Committee on Mental Hygiene, calling attention to these difficulties and urging that some action be taken to remedy them.

Some of the more recent developments in nursing were described very briefly with emphasis on the educational preparation required for such branches Emilie Robson discussed the opportunities in industrial nursing; Mrs. Hill, social service work in the control of venereal disease: Anne Stevens, the development of maternity clinics and the whole scheme of pre-natal teaching and supervision, and Mrs Dahlman, the many phases of nursing work in which a sounder knowledge of food and nutrition is becoming increasingly essential. All these new branches of work create new demands on the training school, which is expected to give at least a good foundation for further specialization.

A brief account of her experiences in introducing public health nursing into the city hospital training school where there had previously been both indifference and opposition to it was given by Carolyn E. Gray. By creating an interest in social problems first, and then selecting carefully the students to make the experiment, the whole attitude of the school was quickly changed, and the course in public health nursing given by Henry Street Settlement in coöperation with Teachers College, became so popular that every student wanted it. The effect on the school as a whole was excellent and students came back more interested than ever in their patients and more appreciative of their opportunities.

Apart from these meetings and conferences of the Nursing and Health Group, and the round tables for informal discussion, there were a number of meetings for the whole Alumni, at which most interesting addresses were given on general educational questions. The meetings were on the whole very well attended both by students and alumnae of the college, the Nursing and Health Group having an attendance of 200 to 300 at some of its meetings. A number of visitors were also present.

## FIRST AID CLASSES POPULAR

During last year more than 20,000 persons attended the first aid classes organized by the American Red Cross, and of these 5,000 completed the course and received Red Cross first aid certificates. The number of classes organized was 965. First aid is an important part of the post-war public health campaign of the Red Cross, and an even larger number of classes and students is anticipated during 1920.

Since 1909, first aid instruction has spread to virtually every industry. More than half a million railroad men alone have taken the course. Mines and quarries and factories of all descriptions have taken it up, and the experience of the Red Cross shows that the accident rate among men who have received instruction in first aid and accident prevention is 75 per cent less than among the uninstructed. Classes may be formed by any community, society, club, store, police or fire department, or similar bodies, in cooperation with the local Red Cross

chapter. A post-graduate course is open to those who have completed the preliminary course and desire further instruction.

## NIGHTINGALE CENTENNIAL

By JAMES RORTY

The hundredth anniversary of the birth of Florence Nightingale will be celebrated the 12th of next May. This event is in itself of sufficient public interest to merit a considerable degree of notice in the newspapers; and indeed, the anniversary celebration is a most opportune time to bring to public attention the progress of nursing made since Nightingale times, the remarkable improvement in hospital administration, the advance in educational standards of the training schools, and the extraordinary development of the public health nursing movement.

Public meetings, exercises, and ceremonies may appropriately be held in commemoration of the centennial, by individual nursing associations or training schools, or by an alliance of training schools and nursing associations, or both. Such an alliance, for example, has been worked out in Chicago by the Illinois Council for Nursing Education which is planning an extensive recruiting campaign. It would seem entirely proper to make such celebrations the occasion for bringing before the public the work of the various nursing groups, their relations to public and private health agencies, and their present needs.

Both the training schools and the nursing associations need primarily a better public understanding of their work which will bring more generous moral and financial support. The training schools have a second vital interest which is particularly important at the present time—that of attracting larger numbers of high grade applicants for their courses. Both of these needs can be effectively served by organizing local celebrations of the centennial.

The celebration may, in fact, be organized for the benefit of the local nursing groups which, in that case, may expect to profit financially from the enterprises. In any case, the expense of the celebration need not be at all heavy. The returns can scarcely fail to be considerable, both in the shape of a public better informed concerning the work of hospital training schools and nursing associations, and therefore more responsive to appeals for financial support, and in the shape of larger numbers of desirable recruits for the training schools.

### Tentative Organization Program

Following is a tentative outline of the manner in which such a celebration might be organized and conducted.

A. *Personnel and Committees:*

(1) *Secretary.* It is, of course, desirable that complete responsibility for the undertaking be lodged with one person whose time, if possible, be entirely free for this work for at least a month preceding the celebrating.

(2) *Centennial Celebration Committee.* Representing training schools, nursing associations, interested lay people, club women, medical professors, the press, state or city government.

(3) *Sub-Committees.* Finance preparation and distribution of printed literature, a motion picture program and publicity.

B. *Program of Celebration:*

Addresses by prominent people; Nightingale Tableaux; motion pictures and music.

C. *Recruiting Activities Incidental to Celebration:*

(1) Complimentary tickets to junior and senior classes of high schools, normal schools, girls' schools and colleges in the city and nearby. Subscription seats sold to general public.

(2) *Distribution of Literature.* Leaflets and pamphlets describing the work of the local training schools, nursing associations, and making an appeal either for recruits or for financial support, as the case may be. The National Organization for Public Health Nursing is prepared to supply at cost recruiting posters and two pamphlets—one "The Foster Mother of the Race," and "The Lady with the Lamp—and her Inheritors." Presumably, similar literature may be obtained from the Red Cross and other organizations.

D. *Preliminary Newspaper Publicity.* If funds are available a local publicity worker should be employed on part time. If not, good results can frequently be secured if an interested local editor is appointed on the committee. The success of the celebration will depend in a considerable degree upon the quality and quantity of this preliminary publicity. The plans for the celebration should be announced six weeks or a month in advance and supplementary announcements of plans, etc., should be run from time to time. For a celebration of this kind it is frequently possible to get special stories in the Sunday editions, illustrated by photographs of nurses at work, interior and exterior views of training schools, nursing association headquarters, etc. On the morning preceding the celebration it should be possible to get a fairly extended story about the celebration with perhaps an editorial in the newspapers on Florence Nightingale and her successors of today.

### Public Health Nursing Organization Co-operates

Aside from the foregoing tentative suggestion, the National Organization has issued a set of Nightingale Tableaux prepared by Miss Gabrielle Elliott, Amateur Dramatic Editor of the Woman's Home Companion, which are published by McMillan and supplied to nursing associations and training schools at the usual 20% discount. These tableaux may be ordered through the National Organization for Public Health Nursing. The two reel film "An Equal Chance," produced by the National Organization for Public Health Nursing, will prove useful as educational and recruiting propaganda, and is particularly appropriate because it contains a brief section on Florence Nightingale. Of the two booklets mentioned, one "The Lady with the Lamp—and Her Inheritors" is a very brief "inquiry puller" describing the present opportunities in the field of public health nursing; the second "The Foster Mother of the Race," is an attractive illustrated pamphlet for popular consumption describing the various types of public health nursing. In addition the National Organization for Public Health Nursing has for sale a limited quantity of Mrs. Mary Aldis' monograph on Florence Nightingale.

### The Diamond

I only polished am in mine own dust:
Naught else against my hardness will prevail.
And thou, O man, in thine own sufferings must
Be polished: every meaner art will fail.

—Gems of the Orient.

# DIETETICS AND INSTITUTIONAL FOOD SERVICE

*Conducted by* LULU GRAVES,
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## THE PRESENT STATUS OF VITAMINES*

By KATHERINE BLUNT AND CHI CHE WANG[1], University of Chicago, Chicago, Ill.

It is not a simple undertaking to summarize even the more important points in the recent literature on vitamines, because the subject has been developing very fast during the last few years, and parts of it are still much in debate. Not only has information been gained from laboratory research but from observations of the tragic human experience with inadequate war diets.

The material is considered under the headings of the three vitamines now recognized—fat-soluble A, present in butter fat, cod-liver oil, green leaves, etc., the absence of which results often in the eye disease xerophthalmia; water-soluble B, fairly widely distributed in plants, and necessary to prevent polyneuritis or beri-beri; and water-soluble C, the antiscorbutic vitamine. All are necessary for the best growth.

### Fat-Soluble A

Dr. H. Gideon Wells[2] of the Department of Pathology of the University of Chicago, who served in Roumania under the Red Cross, tells a dramatic story showing the need of this vitamine for children. The scanty diet in Roumania, when he arrived, consisted of little more than a limited amount of corn-meal and quantities of a very thin bran-vegetable soup. There was no milk nor butter, for the Austrians had driven off the cows. Many of the children had eye disease, sometimes so severe as to cause blindness. There also was much of the distressing swollen condition known as war-edema, the latter probably due to the low calories and specially the low protein of the diet. Dr. Wells, at the height of his difficulties in getting food of any kind, learned of a vessel which had put into Archangel with cod-liver oil as its entire cargo. Through the efforts of the Red Cross, all of it was sent down, and it saved the lives of many of the children. After their long fat starvation, they took readily what might have been refused under happier circumstances.

Not only xerophthalmia but rickets may be connected with lack of fat-soluble vitamine. Work by Mehanby (1) on puppies seems to point in this direction, and possibly that of Hess and Unger (2) on the value of cod-liver oil in curing and preventing rickets in negro infants.

The need for fat-soluble A is not limited to children or young animals in general. Drummond (3), in London, has shown that as young rats approach maturity their requirement becomes markedly less. They can even live without it in apparently good health for considerable time, but sooner or later they lose weight and often have eye disease. They also show a distinct decrease in resistance to various infections, many deaths from infectious disease occurring. The older the young rats are the longer they can stand the inadequate diet before their decline. Dr. McCollum in his lectures has reported what he believes to be a similar pathological eye effect in adult human beings in certain northern lumber camps where the only fat is cured bacon and where the diet must be almost completely lacking in *A*. A condition known as "night-blindness" is prevalent—a defect of eyesight not noticed by the non-reading laborer till the dim light of night. "There is therefore every reason," says Drummond, "that great care should be taken to ensure that dietaries of adults contain an adequate supply of foodstuffs in which the fat-soluble A is present."

The fat-soluble vitamine occurs in more foods than was at first thought, but in variable quantities. Butter fat is still regarded as the most important source, but the quantity (4) therein depends upon the quantity of *A* in the feed of the cow and upon the manipulation of the butter itself. (See below in connection with stability.) Whale oil is another fairly rich source, though not so rich as butter. Drummond (5), with carefully standardized methods of feeding young rats and noting the change of weight, if any, week by week, found that he obtained about the same satisfactory growth when the fat-soluble A came wholly from 8 per cent butter fat or 20 per cent whale oil. McCollum (6) has found even smaller amounts of butter fat entirely satisfactory—as little as 3 per cent. Fish oils in general, and fat fish may serve as valuable sources. Oleo oil, as shown by Osborne and Mendel several years ago, contains a fair amount of it, and so do oleomargarines made from oleo oil, but not the nut margarines made wholly from vegetable oils (8). However, as Steenbock (4) says, "Oleomargarines . . . are not to be considered in the same class as good butter in providing the organism with the fat-soluble vitamine." Pig's liver oil, and liver tissue, kidney tissue, probably glandular organs in general (9) give fair supplies— that is, that portion of the animal of which we eat little is far superior to the skeleton muscle of which we eat much.

Of the vegetable sources we know even better than formerly the value of spinach. Osborne and Mendel (10) fed rats dried spinach to the extent of 5 per cent of the diet as their only source of fat-soluble vitamine for eighty-seven and eight-three days; then substituted the spinach by yeast, which is free from the fat-soluble vitamine, containing only the water-soluble. The rats continued to thrive for ninety-three and ninety-seven days

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1. The authors wish to thank Dr. Lafayette B. Mendel and Dr. E. V. McCollum for reading this paper and making important suggestions.

2. Personal communications.

more; that is, they had stored up enough of the fat-soluble vitamine from the spinach to last through the long period of deprivation. Cabbage is not so satisfactory. Carrots (11), although not leaves, have some fat-soluble A; peas (12) a small amount. So, too, possibly, do bananas (13). Yellow corn (14) may contain sufficient amount to allow normal growth and reproduction in the rat, but white corn is valueless as a source.

A very interesting generalization[3] has been made by Steenbock (14) about the foods which contain this vitamine: they all contain yellow coloring matter. Butter, egg yolks, cod-liver oil are obvious examples. Oleo oil, the part of the beef fat which contains the vitamine, is yellow, the solid beef fat which lacks it is colorless. Of the commercial oleo oils which he has tested, those most highly pigmented are richest in the fat-soluble vitamine. Colored roots such as carrots and sweet potatoes have it, but sugar beets, mangels, dasheens, and Irish potatoes have little or none. Spinach and grass, of course, have yellow associated with their chlorophyl. The carotin isolated by Steenbock did not serve as a substitute for the vitamine, but carotin is a very labile substance and may have changed chemically in the process of removal. "It appears reasonably safe, at least as a working hypothesis, to assume that the fat-soluble vitamine is a yellow plant pigment or a closely related compound."

The stability of fat-soluble A is not nearly so great as has been thought. The earlier conclusion that it is stable to heat is due more probably to the fact that such large quantities of the vitamine-containing food were fed that a destruction of part of it would not be noted. Steenbock, Boutwell and Kent (4) have found that after butter fat had been heated for four hours at 100° its growth-promoting properties had largely disappeared, and after one hour at 100° they had distinctly lessened. Drummond, interested particularly in the use of hydrogenated fats as butter and lard substitutes during the fat shortage in England, has investigated the question both for whale oil and butter. The hydrogenation of the whale oil at 250° for four hours completely destroyed the *A*. Even heating at 100° for an hour had the same effect, or keeping it for eighteen days at 37° spread out exposed to air. The heat was the cause of this loss of efficiency, for shaking with oxygen at room temperature made no change. Steenbock mentions a sample of butter which showed no demonstrable amount of *A* after it had been kept three weeks unsalted in a poorly iced refrigerator. The probability of some destruction during ordinary cooking processes is thus of interest.

With cabbages (15), too, high temperatures or drying may reduce the efficiency, an hour's heating at 100°-120° having no effect on *A*, but two hours at 130° destroying it completely.

The fat-soluble vitamine therefore seems to be of even greater importance in the diet of young and old than was formerly realized, and while it is more widely distributed, it is less stable than the first investigations demonstrated, and may be even destroyed in part at temperatures used in cooking.

## Water-Soluble B

For studying the water-soluble vitamine, observations have been continued on the growth of rats and on the onset of polyneuritis in pigeons and chickens. While it is not definitely proved that these two methods deal with one and the same substance, the assumption that such is the case is usually made. A new and most promising method of research has just been developed by Williams (16) in the laboratory of Physiological Chemistry of the University of Chicago. Yeast (16, 17), unlike the higher plants, cannot grow without this vitamine. Therefore if drops of different solutions each containing a single yeast cell are observed microscopically at intervals of a few hours, the growth of the yeast and the number of cells into which it has multiplied will show not only whether the solutions contain the vitamine but the relative quantities present. This method is of course much simpler and quicker than the usual feeding experiment and will probably result in a rapid increase in our knowledge of this vitamine.

Water-soluble B occurs more widely in plant than in animal foods. Milk is by no means rich in it. Osborne and Mendel (18) found it necessary to give their rats at least 16 cc. per day for normal growth. They discuss but do not explain to their satisfaction the much quoted[4] result of Hopkins, who secured remarkable growth on adding as little as 2 cc. of milk to a diet on which his rats were failing. They warn against a diet of white bread and only a little milk, or against feeding infants a top milk, water, sugar mixture. Muscle tissue also is low in this vitamine, but various other animal tissues—heart, kidney, brain, and liver—are satisfactory sources of supply—a distribution similar to that of *A* (9), though somewhat wider.

An especially satisfactory statement of the occurrence of this vitamine in plants, as so far known, is given by Osborne and Mendel (19) in the *Journal of Biological Chemistry* for this past August. They list a wide variety of plant foods, including, among others, seeds or cereals and a number of legumes, spinach, cabbage, potatoes, and carrots; and they add to the list, from their own recent experiments, the usual edible portion of the onion, turnip, beet (leaves, stem, and root), and tomato. A goodly number of our common vegetables have thus been tested for *B*, and so far, without exception, every one has been found to contain it—a much wider distribution than that of *A*. The part of the cereal that is rich in it is not the bran, as usually supposed, so much as the germ, which is often removed with the bran, *e. g.*, in rice polishings. Commercial wheat bran contains more or less vitamine, according to the amount of the germ associated with it. Of one sample tested by Chick and Hume (20) five and a half times as much had to be used to cure polyneuritis pigeons as was necessary when the germ was used. Our commercial bran is especially thoroughly "skinned" when it comes from large, well-equipped modern flour mills (21), and therefore is of little value to correct the deficiency of white flour and bread. Even the yeast or the milk used in the white bread does not prevent polyneuritis in pigeons (22), though the yeast delays the period of its onset. On the other hand, bread made from real graham flour is adequate. Of course, these facts have important bearing upon the kind of flour most desirable from the standpoint of national nutrition. Voegtlin and Lake, in a later paper (23), say, "We believe that a product which does not contain any bran but does include the germ would not possess these objectionable features [of causing intestinal disturbances], would at the same time be more nutritious and would reduce greatly the possibility of vitamine deficiency in the modern mixed diet."

Yeast (10) is distinctly the richest known source of the water-soluble vitamine, being four times as efficient as

3. See, however, an article by Palmer, which appeared after this paper had gone to press, in Science, 50, 502, (Nov. 28), 1919, and which enumerates various foods with yellow color and without A, and with A without yellow color.

4. Sherman: Food Products, 1914, p. 79.

dried spinach, which ranks next among a group studied quantitatively. Only half as rich as spinach are whole wheat, soy beans, dried eggs, milk solids. Cabbage, too, is not so satisfactory as spinach. Wheat germ is a valuable source, and so are navy beans and peas. Immature alfalfa clover and timothy show decided advantage over the mature (19). This variation with age may apply to plant foods in general and may mean a real nutritive superiority for young vegetables.

Like fat-soluble A, *B* is not so stable toward heat as we formerly supposed. McCollum's beans and peas (12), which, although heated for one and a quarter hours in an autoclave, still supplied all the *B* that the rat needed, were fed in large quantities, often as much as 25 per cent of the diet. When the food supplying *B* is fed in the smallest amount which will produce growth at all (24), it is found that heating above 100° does cause deterioration, and that the heated food has to be supplied in larger quantities than the raw food For example, while wheat germ (25) heated 2 hours at 100° loses little or none of its potency, heated 40 minutes at 113° it loses one-half, and heated 2 hours at 118°-124° it may lose up to nine-tenths. These temperatures, of course, point to the safety of the water-soluble vitamine in our ordinary cooking processes, but the danger of its partial or complete destruction in commercial canning or other high-pressure cooking. Tinned meat, Chick and Hume report, is devoid of this vitamine, a fact shown not only by their laboratory experiments, but by the repeated development of beri-beri in the British army in the Dardanelles and Mesopotamia, where the diet for a time consisted only of white bread, tinned meat, and jam.

## Alkali Treatment

The stability of *B* toward alkali seems to be uncertain, though here, too, according to Chick and Hume, the difficulties may be due to feeding such large quantities that a destruction of half or even more during the alkali treatment would not have noticeable effect on the animals. Sullivan and Voegtlin (26) of the United States Public Health Service, who observed several years ago that chickens developed polyneuritis promptly on corn bread made with soda but not on corn bread made with salt, now report polyneuritis in cats and dogs fed meat treated with sodium carbonate till distinctly alkaline and then heated at 120° for three hours; meat heated without the alkali was still a fairly satisfactory food. Rats, however, that were fed the alkali meat liver for at least 110 days—a fact quoted by Osborne and Wakeman (27) to show, with experiments of their own, that the vitamine is more resistant to alkali than generally supposed. Daniels and McClurg (28) feeding generous quantities of navy beans, soy beans, and cabbage, found the diets entirely satisfactory even when cooked for an hour and a half with 5 per cent sodium bicarbonate. McCollum and Simmonds (29) find the *B* in wheat germ destroyed by boiling with 0.28 per cent sodium hydroxide for an hour, but Osborne and Wakeman (27) find it undiminished in yeast digested with tenth normal sodium hydroxide (slightly stronger than McCollum's) for two and a half hours, and then heated for two hours. It may be that previous extraction with ether or other removal of the fat lessens the stability of *B* (16).

What happens in the body as a result of lack of the water-soluble B in the diet? McCarrison (30), working in India[5] has made striking advances in answering this question. He has observed changes during life and loss in weight of organs after death in a large group of pigeons made polyneuritic by a diet of polished rice, and later a group fed polished rice, butter fat to supply *A*, and onions for *C*.[6] There was little difference between the group undergoing *B* starvation and that with general vitamine starvation. The body temperature of the pigeons gradually fell from a normal average of 107° F. to 98° or 99° F., showing a marked slowing up of metabolic processes. Digestive processes were greatly impaired; the starch was largely excreted unchanged. The different organs of the body lost weight strikingly, all except the adrenals, which gained—thymus most, then, in order, testicles, spleen, ovary, pancreas, heart, liver, kidneys, stomach, thyroid, brain. The testicles lost 93 per cent and the ovaries 69 per cent of the original weight. "Perhaps one of the most remarkable results of a dietary deficient in so-called anti-neuritic vitamine is the constant and very pronounced atrophy of the testicles in males and the similar but less pronounced atrophy of the ovary in females." Other investingators have noted similar results of vitamine starvation. Drummond found that when male rats, after as short a time as fourteen days on a diet adequate except for *B*, were mated with females on an adequate diet, no pregnancies resulted.

Such degrees of atrophy in the human subject would result in sterility in males and in amenorrhoea and sterility in females. Human observations are not lacking. McCarrison quotes Vedder as saying that beri-beric women cease to menstruate. "War amenorrhoea" (abnormal cessation of menstruation) is referred to in many recent German periodicals with alarm, attributing it in part at least to defective nutrition. In the Charité-Frauneklinik in Berlin it has been seven times more frequent than before the war.[7] In Belgium, too, many cases have been observed (31). The experience of Benedict's young men is also striking (32). These difficulties may, of course, be due to general food lack rather than to the specific deficiency in *B*.

Miscellaneous infections were very frequent among McCarrison's pigeons. The whole body was liable to be overcome by a rank growth of bacteria. There may be some similarity between this observation and the great increase in tuberculosis abroad during the war.

The whole morbid process of McCarrison believes to be due to muscular starvation of all tissue cells. "Vitamines are nuclear nourishers."

## Water-Soluble C

The third vitamine now recognized is the antiscorbutic. The earlier conclusion (3) that scurvy is not a deficiency disease, but is due to constipation, has been abandoned. Its adoption probably arose from having a non-controlled milk intake in the diet of the experimental animals and therefore a slight and variable amount of the vitamine.

With this vitamine even more than with the others, human experience as well as laboratory experiments must be considered—both infantile scurvy and adult scurvy. Mild cases of the latter may merely manifest themselves in languor and depression, and severe cases in looseness and final falling out of the teeth, soreness and hemorrhages of the gums, swelling of the joints, great weakness, and finally death. Degenerative tooth changes are

5. A fairly full abstract of the first of these papers is given in British Medical Journal 1, 177, (Feb.), 1919, and a briefer reference to it by Le Mer in Jour. Amer. Med. Assoc. 73, 1381, (Nov. 1), 1919.

6. Observe apparent contradiction here with Osborne and Mendel's work with rats, proving B in onions. McCarrison's pigeons became polyneuritic even more promptly in the butter-fat-onion group than on polished rice alone.

7. (British Medical Journal, Dec, 1, 1917, p. 734).

particularly characteristic of scurvy (34). They have been described at length in the guinea-pig and are said to be identical in the human subject.

The laboratory animal most used is the guinea pig, for rats, while they thrive better with the antiscorbutic than without it, (35) do not have scurvy. The usual experimental method, carefully worked out, is to note the smallest quantity of experimental food which will prevent the onset of scurvy in the guinea pig when added to a basal "scorbutic diet" such as oats, hay, and autoclaved milk.

Among the chief workers on the antiscorbutic vitamine are Hess in New York, Givens in New Haven and Rochester, and the group, largely women, at the Lister Institute of Preventive Medicine, London—Harriette Chick, E. Margaret Hume, and others. The results of the latter were made the basis of the recommendations of the Food (War) Committee of the Royal Society on the prevention of scurvy in the army and navy (36). Three recent editorials (37) in the *Journal of the American Medical Association* summarize much of their work as well as that of others.

"The vitamine is present in living vegetable and animal tissues, in largest amounts in fresh fruits and green vegetables, to a less extent in root vegetables and tubers. It is present in small amount in fresh meat and milk, and has not been detected in yeast, fats, cereals, pulses" (38). It is sensitive to high temperature and destroyed "when the living tissue is disorganized by drying and other methods of preservation." Orange juice has been generally recognized as one of the best antiscorbutics; grapes are only about one-tenth as satisfactory. Orange peel extract is also of value. Lime juice is poor. The "lime juice" of the eighteenth and early nineteenth century which was responsible for the disappearance of scurvy from the British navy was really lemon juice from the Mediterranean countries. In 1875 certain vessels on polar exploration changed from the old "lime juice" to the true west Indian lime, and scurvy broke out again with great severity. The Lister Institute work has shown that fresh lemon juice has about four times the value of lime juice as an antiscorbutic and that preserved lime juice is almost valueless.

Of the vegetables (39), often more readily available than the fruit and cheaper, raw cabbage is even better than orange juice, and the raw juices of swede (a kind of turnip), beetroot, and carrots are of service. Cooking (40), however, diminishes or entirely destroys their efficiency except when the vegetables (carrots) are young (Hess). Cabbage (15) cooked for one hour at 60° or twenty minutes at 90° to 100° lost about 70 per cent of its antiscorbutic value and for one hour at 90° more than 90 per cent. Long cooked or canned vegetables are thus of no value as antiscorbutics, a fact borne out by human experience for many years. Canned tomatoes (40) seem to be an exception, possibly because of their acid and original richness in the substance. They have been successfully used as a substitute for the more expensive orange juice to prevent scurvy in infants receiving pasteurized milk (41).

Drying, too, lessens the value (42) and, still more, storage after drying. Dryed vegetables and herbs have been tried in scurvy in the Army and Navy with no help. Dried tomatoes, however, Givens (43) found, still retain a significant amount of the original high antiscorbutic potency. Drying generally does least harm when done quickly at a low temperature (under diminished pressure) and when the vegetables dried are young. Dried beans, themselves valueless, develop their vitamine on sprouting (44). The Food (War) Committee of the Royal Society recommends (36) that when other antiscorbutics are not available the beans be sprouted and the sprouts used. Their therapeutic value was strikingly shown when King's College Hospital, London, with a number of mild cases of scurvy in soldiers from Serbia, divided its patients into two groups, treating thirty in one ward with 4 ounces of fresh lemon juice daily, and twenty-seven in another with 4 ounces of dried haricot beans freshly germinated. Of the patients on the lemon juice 53.4 per cent were cured within four weeks and of those on the germinated beans 70.4 per cent (45).

Potatoes contain the vitamine if not cooked too long, but, as the only antiscorbutic, the ration must be as much as fourteen ounces per man per day (36). In Glasgow (46), recently, a poor law hospital which had apparently been depending largely on potatoes and had been near the danger line with a normal of three cases of scurvy a year, developed fifty cases when the lack of potatoes in the fall and winter of 1916-17 caused the substitution of the potatoes by rice and bread. In this country, too, Hess (47) speaks of the development of scurvy in numerous institutions in the spring of 1916 after an exceptionally poor potato crop the previous year. In one there were more than twenty deaths, in another more than two hundred diagnosed cases and probably many latent cases which escaped observation.

Milk (48) is of only moderate value as an antiscorbutic and loses most of the value when pasteurized or boiled. Commercial condensed milk (49) is valueless and so, too, is dried milk unless the drying is done very quickly, e.g., for a few seconds at 116° (Hess and Unger) (50). Numerous observations have been made of infantile scurvy developing from use of pasteurized milk and its check by the addition of orange juice. In this connection should be mentioned a very valuable summary, though without the work of the last two years—Morse's "A Résumé of the Literature of Infantile Scurvy during the Past Five Years" in the *Boston Medical and Surgical Journal* (51). An editorial in the *Journal of the American Medical Association* (52) cites numerous recent distressing cases of infantile scurvy abroad, for instance, in Prague in 1917-18 when the much desired "raw" milk was often of doubtful "rawness," oranges had disappeared from the markets since early in the war, and other fruits and even most green vegetables were difficult to obtain and usually very expensive.

Fresh meat has so little antiscrobutic value that the Royal Society (36) states that as much as two to four pounds daily are necessary if it is to be used as the chief preventive agent, and tinned meat is completely valueless. Dutcher, Pierson, and Biester (53) find practically none even in raw beef. Their laboratory experiments do not confirm Stefáson's remarkable report (54) of his polar experiences. His habit, and that of his party in the north, was to live almost wholly on seal meat and bear meat, using not only the muscle tissue, but liver and various other organs. Often they consumed raw frozen liver. They had no cases of scurvy on this diet. However, three men, who were separated at times from the main party and depended largely on some cached foods which they had found—flour, salt pork, butter, honey, sugar, pilot bread, preserved fruit, pemmican, meat extract, dried fruit, rice, beans, and peas—developed serious scurvy. They were promptly cured when fed meat, largely raw.

One more human scurvy experience (55) illustrates a number of the points so far stated. A number of camps

of the South African Native Labour Corps were established in France during the war. The rations consisted of 1 pound of frozen or preserved meat, 8 ounces fresh vegetables, and definite quantities of mealy meal (corn) or rice, bread, coffee, sugar, salt, margarine, and tobacco. In country depots where they could pick extra fruit (apples) no scurvy occurred, but in a camp when this was impossible 40 per cent of the natives at one time showed symptoms of scurvy. The half pound of fresh vegetables probably allowed no margin for the reduction of the antiscorbutic, and yet all foods had been cooked for at least three hours. The chief part of the cure was to give lemon juice, increase the supply of vegetables and limit their cooking to forty-five minutes. In a camp where the scurvy was most severe and lasted longest it was discovered that the instruction to shorten the cooking period had been disobeyed. The condition was soon improved when the cooking was reduced to forty minutes.

In conclusion, it is plain that remarkable as are the advances in the subject, we still have far to go for anything approaching complete knowledge. We need more quantitative information as to the distribution of the vitamines in foods and their resistance to all sorts of manipulations—cooking, storing, aging. We lack knowledge of the quantities advisable for human beings of different ages. Finally, and most fundamentally, we yet await the isolation of the substances themselves in purity and the establishment of their chemical composition.

It is very difficult to say what is the importance to the average individual of giving thought to these three vitamines in choosing the diet. Most of us probably use milk or leaf vegetables (McCollum's "protection foods") to get an adequate supply of *A*, enough vegetables of all kinds and whole cereals to get *B*, and enough uncooked or little cooked foods for *C*. But the occasional moderately well-to-do individual with dietary idioscyncracies, many persons on very limited incomes, and many in institutions must be close to the danger line. Probably *C* with its marked unstability to heating or drying is the most often low in quantity, and *A* with its limited distribution second. It is more than probable, too, that all sorts of common languors and inefficiencies, and susceptibilities to many miscellaneous infections, are connected with shortage in vitamines.

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## NEWS ITEMS OF THE DIETITIANS

Henrietta French has been given the position previously held by a steward at the Chevy Chase Club in Washington, D. C. This is the first time a woman has been given this responsibility in this well-known club, and so far as we know, it is the first time a woman has done this sort of thing in any large Men's Club. Another noteworthy feature is that Miss French is receiving the same salary that a man would in a similar position.

Miss Helen L. Wallace, a graduate of the Boston Cooking School, is in charge of the department of dietetics of Crouse-Irving Hospital, Syracuse, N. Y. She will have entire charge of the buying, the employees, teaching the nurses and all features of the department. Miss Wallace has had several years experience in hospitals in Springfield, Mass., Atlantic City and Philadelphia.

Miss Gertrude Brown has recently gone to Central Dispensary and Emergency Hospital, Washington, D. C., as a dietitian.

The hospitals of Louisiana have recently attracted a number of dietitians to their state. Miss Genevieve Potter is at the Presbyterian Hospital, New Orleans; Miss Helen Baker at the U. S. Marine Hospital, New Orleans, and Miss Stella Steele at the North Louisiana Sanitarium, Shreveport. Miss Potter had student dietitian training with Miss Geraghty at New Haven. Misses Baker and Steele are both from Kansas City, Mo.

Miss Blanch Dimon and Miss Katherine Bieble have finished the pupil dietitian training given by Miss Sate Harris at Massachusetts General Hospital, Miss Dimon is being retained by Miss Harris as an assistant, and Miss Bieble has joined Dr. Allen's staff of dietitians.

The New York Association of Dietitians held a meeting February 10 in the Seminar Room of the Y. W. C. A. Miss Isabel Ely Lord, Pratt Institute, talked on Educational Background in Administration and Mrs. Mary Swartz Rose, Teacher's College, discussed Essentials in Dietetics for Hospital Dietitians.

The meeting on the evening of March 8 was held at the New York Hospital. Dr. Walter Eddy, Prof. of Bio-Chemistry, Teacher's College, spoke on Problems in Army Feeding. Prof. Eddy is affiliated with the Research Clinic of New York Hospital and was Major in charge of the Food and Nutrition Section, A. E. F.

The class at Cornell University studying Diet in its Relation to Health and Disease is devoting part time to practical problems. Of the twenty-one students registered for this course, one is teaching dietetics to the nurses of the Ithaca Hospital, fifteen are doing volunteer work with the Associated Charities of the city and the others are doing some special form of work with nutrition clinics or private service. This part of the course is planned and supervised co-operatively by Miss Beattie, Superintendent of the Hospital, Miss Bassett, Director of the Associated Charities, and Lulu Graves of the Home Economics Department of the University. Miss Graves also gives the lectures included in the course.

The Dietetic Section of the Home Economics Association of Philadelphia held its regular monthly meeting February 26th at the Pennsylvania Hospital, 8th and Spruce Streets. Several phases of post-graduate courses offered Domestic Science graduates were presented by the following dietitians:

Miss Clarible McCrae, Philadelphia General Hospital,
Miss Ellen Gladwin, Jefferson Hospital,
Miss Emma Smedley, Director of School Luncheons, Philadelphia.
Miss Ethel Pentecost, Pennsylvania Hospital for Insane,
Miss Martha Deal, Pennsylvania Hospital for Insane,
Miss Evelyn Nesbit, Mt. Sinai Hospital,
Miss Ruth Gilpin, Presbyterian Hospital,
Miss Helen Weaver, Director Dietetic Kitchen,
Sister Emma Tappert, Lankenau Hospital,
Miss Helen E. Gilson, Pennsylvania Hospital.

## HOTEL MEN'S SHOW

Of especial interest to dietitians and hospital superintendents will be the second annual Hotel Men's Show, to be held at the Coliseum, Chicago, the week of May 10.

Displays of the most up-to-date furnishings, equipment, and labor-saving devices for the use of hostelries, as well as a wide range of standard food products, will be shown. Addresses on dietetics will be given by Miss Lulu Graves, president, American Dietetics Association, and by Miss Flora Rose of the department of Home Economics, Cornell University.

Realizing that a visit to this exposition will be profitable to hospital executives, THE MODERN HOSPITAL has arranged for a supply of tickets of admission to the Hotel Men's Show for the purpose of supplying, gratuitously, any hospital superintendent or dietitian with such tickets as he may wish to use.

## FEW NURSES BEING SENT OVERSEAS

From now on, the Red Cross will send abroad only very few specially trained nurses with unusually high qualifications. The number of American Red Cross nurses in France and Italy is constantly decreasing. Poland is reported as the only country to which additional nurses are being sent. Miss Alice Fitzgerald, recently appointed chief nurse to the League of Red Cross Societies, gave the number of nurses in Europe on November 1, as follows: France, 30; Italy, 7; Palestine, 7 (approximate); Near East, 60; Balkans, 61; Russia proper, 2; Siberia, 139 to 160; Poland, 10; Greece and Serbia, 6; Persia, 1.

## GOVERNMENT NEEDS PHYSICIANS

The United States Civil Service Commission announces that a large number of physicians are needed for employment in the Indian Service, the Public Health Service, the Coast and Geodetic Survey, and the Panama Canal Service. Both men and women will be admitted to examinations, but appointing officers have the legal right to specify the sex desired when requesting the certification of eligibles. Entrance salaries as high as $200 a month are offered, with prospect of promotion in some branches to $250, $300, and higher rates for special positions.

Further information and application blanks may be obtained from the secretary of the United States civil service board at Boston, New York, Philadelphia, Atlanta, Cincinnati, Chicago, St. Paul, St. Louis, New Orleans, Seattle, or San Francisco, or from the United States Civil Service Commission at Washington, D. C.

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It never rains roses; when we want more roses, we must plant more bushes.—George Eliot.

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People seem not to see that their opinion of the world is also a confession of character.—Emerson.

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A Chinese proverb says: "A lie has no legs, and cannot stand; but it has wings and can fly far and wide."

# DISPENSARIES AND OUT-PATIENT DEPARTMENTS

*Conducted by* MICHAEL M. DAVIS, JR.
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## NEW YORK DISPENSARIES: MEDICAL ORGANIZATION*

A section of Report made by the Public Health Committee of the New York Academy of Medicine on the New York Dispensaries.

*(a) Types of Dispensary Medical Organization with Reference to Affiliation of Dispensary.*—Before discussing in detail the many problems of medical organization of dispensary service, it will perhaps be helpful to classify the dispensaries included in this study according to the relation of the dispensary medical organization to hospital service and to medical instruction in undergraduate and postgraduate medical schools. On the basis of such relation, five groups of dispensaries may be defined:

(1) Hospital dispensaries in which there is a recognized coördination of the medical organization of the hospital and the medical organization of the dispensary. Such are: Brooklyn Hospital Dispensary, Gouverneur Hospital Dispensary, Harlem Hospital Dispensary, Fordham Hospital Dispensary, Lincoln Hospital Dispensary, Roosevelt Hospital Dispensary, New York Hospital Dispensary, Ruptured and Crippled Hospital Dispensary, New York Orthopedic Hospital Dispensary, Neurological Institute Dispensary, and Babies' Hospital Dispensary.

(2) Hospital dispensaries in which there is no clearly defined coördination of the medical organization of the hospital and the medical organization of the dispensary. Such dispensaries are: Mt. Sinai Hospital Dispensary, Lebanon Hospital Dispensary, St. Vincent's Hospital Dispensary.

(3) Hospital dispensaries in which there exists a coordination of the medical organization of the hospital, the medical organization of dispensary, and the teaching staff of an undergraduate or postgraduate school of medicine. Such are: Polhemus Dispensary (Long Island College Hospital), St. Luke's Hospital Dispensary, Presbyterian Hospital Dispensary, Bellevue Hospital Dispensary, Post-Graduate Medical School and Hospital Dispensary, Nursery and Child's Hospital Dispensary, Manhattan Maternity Clinic, Sloane Maternity Clinic, Knapp Eye Clinic, New York Eye and Ear Infirmary Dispensary, Manhattan Eye, Ear and Throat Hospital Dispensary, and Clinic for Functional Re-education.

(4) Dispensaries in which there is an established coördination of the medical organization of the dispensary and the teaching staff of an undergraduate medical school. Such dispensaries are: Vanderbilt Clinic and Cornell University Medical College Dispensary.

(5) Dispensaries in which there is no affiliation whatsoever of the medical organization of the dispensary with either a hospital or the teaching staff of an undergraduate or postgraduate school. Such are: New York Dispensary, Demilt Dispensary, Brooklyn City Dispensary, and New York Clinic for Speech Defect.

*(b) The Medical College and the Dispensary.*—Of the dispensaries included in this survey of organization only fourteen have direct affiliation or cooperative relationship with undergraduate or postgraduate medical schools. Of the fourteen, twelve are hospital out-patient departments in which there is an official correlation of the hospital medical organization, the dispensary medical organization, and the teaching staff of an undergraduate or postgraduate school. Cornell Dispensary and the Vanderbilt Clinic are independent of hospital affiliation.

The character of the relationship between the hospital dispensaries and the medical schools varies considerably. In the Polhemus Clinic, undergraduates of the Long Island College are given formal instruction as a matter

### *MEDICAL ORGANIZATION OF DISPENSARIES*

*(a) Types of dispensary medical organization with reference to affiliation of dispensary.*
*(b) The medical college and the dispensary.*
*(c) Coordination of hospital and dispensary medical service.*
*(d) Method of appointment of dispensary physicians.*
*(e) Utilization of interns in dispensary work.*
*(f) Total number of physicians working in dispensaries of New York City and amount of service rendered.*
*(g) Compensation of physicians in out-patient departments.*
*(h) The development of special clinics.*
*(i) Public health centers.*
*(j) Pay clinics.*
*(k) The Workmen's Compensation Act in relation to dispensaries.*
*(l) Home visiting medical service.*
*(m) Laboratory and x-ray service.*
*(n) The nurse in the dispensary.*
*(o) The dietitian in dispensary work.*

*This is the second chapter in a series of four chapters taken from this report because of their special interest to dispensary and hospital executives. Chapter 1, "Organization, Administration, and Equipment of Dispensaries," was published in two parts, Part I in the February issue, Part II in the March issue.

of routine. In the Post-Graduate Medical School and Hospital Dispensary, instruction is an essential feature of the dispensary program, the entire dispensary program being based on such instruction. Bellevue Hospital Dispensary may be utilized occasionally for the instruction of students of the medical schools which are affiliated with the Bellevue Hospital, namely, Cornell University, the College of Physicians and Surgeons, and the New York University. Each of these institutions is responsible for the medical work of that division of the dispensary which bears the name of the medical school.

Students of the College of Physicians and Surgeons rarely visit the dispensary, but students of Cornell and New York University Medical College visit the dispensary often. There is, however, no definite program of teaching in the dispensary, and the dispensary work has not been developed with this end in view, since each of the three schools named has its own dispensary department in its own building.

St. Luke's Hospital, which has a cooperative relationship with the College of Physicians and Surgeons, also permits the instructors at the College of Physicians and Surgeons who are on the St. Luke's Dispensary staff, to utilize clinics for teaching purposes, but instruction here is likewise occasional rather than routine and designed chiefly for summer work of students. The Sloane Maternity Hospital Dispensary has an affiliation with the College of Physicians and Surgeons and its clinics are largely used for the instruction of students. The Manhattan Maternity Clinic and the Nursery and Child's Hospital Dispensary have a cooperative relationship with Cornell and Physicians and Surgeons, respectively, for the instruction of students of these institutions in obstetrical work in the homes of patients. In the Knapp Eye Clinic, the New York Eye and Ear Infirmary, and the Manhattan Eye, Ear and Throat Hospital Dispensary, postgraduate courses are given and undergraduates are occasionally given instruction through special arrangement with the dispensary physicians who may be members of the Faculties of medical schools. The director of the Knapp Eye Clinic, for example, is also in charge of a class at the Vanderbilt Clinic and frequently brings students to the Knapp Eye Clinic. The Clinic for Functional Re-education has been affiliated with Cornell Medical School and students of Cornell are given instruction by the members of the medical staff of the clinic, the majority of whom are also members of the Cornell Faculty.

In the institutions such as Cornell Dispensary and Vanderbilt Clinic, which are definite departments of Cornell Medical School and the College of Physicians and Surgeons, respectively, the relationship of the teaching staff to the dispensary medical staff is practically the same. Some members of the teaching staff are made responsible for clinic work and certain instructors are designated as clinic physicians. All members of the dispensary staff do not receive appointment to the teaching staff of the medical college, but there is opportunity for junior members of the dispensary staff to become members of the teaching staff of the medical school as they demonstrate special ability, and as vacancies arise.

In the remaining dispensaries included in this study, the instruction of undergraduate and postgraduate students has no part in the dispensary program. A member of the dispensary staff who happens to be also a member of the teaching staff of a medical school may bring his students to the dispensary, but this relationship is wholly informal and changes, of course, with changes in the dispensary medical staffs.

## Teaching Dispensary Is Efficient

The rudimentary development of dispensary medical work for teaching purposes in New York is regrettable. Teaching is a powerful stimulus to efficient dispensary work. Just as the teaching hospital is, generally speaking, more efficient than the non-teaching hospital, so the teaching dispensary is usually more efficient than the non-teaching dispensary. The responsibility for teaching places upon the dispensary physician the obligation of keeping up with the progress of medical science; it stimulates him to research work and to more careful study of patients, in order that he may demonstrate his work more effectively; and it requires him to use methods of precision which otherwise may not appear essential to the routine of dispensary practice.

A survey of the field brings out the fact that both the medical schools and the dispensaries have overlooked large opportunities for cooperative work. This is particularly true in the case of special dispensaries, such as the three large orthopedic dispensaries, the Neurological Clinic, the Babies' Hospital Dispensary, the Clinic for Speech Defects, the Clinic for Functional Re-education, and others. These clinics offer great opportunities for students in the study of special types of disease not ordinarily met with in general dispensary practice, and yet, with few exceptions, these opportunities are not used. It is patent that with the large number of dispensaries in the city of New York and the comparatively small number of undergraduate students, not all the facilities could be taken advantage of for this kind of instruction. Should New York, however, realize the existing opportunity of becoming the medical center of the country, and of the world perhaps, the vast out-patient clinical material could be used in postgraduate instruction. In this connection a few words about the "Minnesota plan" will be of interest. There the State University has entered into arrangements with the Mayo Foundation for the purpose of developing postgraduate medical specialization along scientific lines. All the instruction during three years is carried on in connection with the University Medical School at Minneapolis. The first year is devoted to out-patient work in a chosen specialty. The second year is divided between out-patient and hospital work, and the entire third year is spent in the hospital. Upon the presentation of an approved written thesis, the successful candidate is given the degree of Doctor of Philosophy in the chosen branch of medicine. Degrees of Doctor of Philosophy in Pediatrics, in Ophthalmology, etc., are issued. At first the degree of "Doctor of Science" was given, but when it was learned that some universities confer that degree *honoris causa*, the degree of Doctor of Philosophy was substituted.

If some such plan or a similar plan could be worked out in connection with the medical schools of this city the out-patient departments of our special institutions would offer excellent material for intensive study.

It can be readily seen from this analysis that the problem of medical organization is quite different in each group. There are also important differences in the problem of individual dispensaries in the first four groups, depending upon the extent to which the medical organization of the dispensary is brought into coordination with hospital medical work or with instruction of undergraduate or postgraduate students.

*(c) Coordination of Hospital and Dispensary Medical Service.*—It is generally recognized that the out-patient department of a hospital has, other things being equal, the advantage over a detached dispensary in several respects. The out-patient department of a hospital can and often does make use of the laboratories and x-ray equipment of the hospital; the patients can be referred to the hospital for observation in cases of obscure conditions, and the out-patient department physicians usually have the privilege of observing in the wards the cases they refer from the clinic, if they choose to do so; the hospital facilities are often availed of to afford out-door department patients the opportunity of a rest over night in the case of minor operations, or when such diagnostic tests as lumbar punctures are resorted to; upon discharge, hospital patients are frequently referred to the out-patient departments for continued treatment, and a link affording the possibility of scientific study of disease is thereby established; and finally, there is greater distinction for physicians to be associated with a hospital out-patient department than with an independent dispensary.

The above mentioned advantages could be accentuated and several additional ones of importance secured, if a closer correlation between the out-patient medical organization and that of the hospital could be established. The welding of the two organizations into one would facilitate the development of a single medical standard for the institution as a whole, and the existing chasm separating medical ideals and practices in the two sections of the same institution would be bridged. Such an arrangement would redound to the benefit of everyone concerned. The hospital would profit from the more careful selection by the dispensary physicians of patients for admission to the wards; the dispensary physicians would be better able to exercise supervision over patients discharged from the hospital, because of a better understanding of hospital treatment given; a *"rapprochement"* between the dispensary and the hospital would be conducive to the development of a satisfactory basis for training physicians in both hospital and dispensary work; and finally, the demand for salaries in dispensary work, which is becoming more and more insistent, could in part be abated by compensation in professional recognition and advancement.

## Difficulties of Co-ordination

The practical difficulties which present themselves in the bringing about of a real and effective coordination between the two medical groups may, perhaps, be summarized as follows:

(1) Owing to the large size of the dispensary medical staffs, it is usually difficult, except in special dispensaries, to arrange a schedule of hospital attending service which will permit all dispensary physicians to act as hospital physicians. The term of hospital service will necessarily have to be very short and rotations frequent. This is less desirable from an administrative point of view than long tenures and few rotations.

(2) It is hardly feasible to expect of physicians enjoying a large practice to give the amount of time required for both hospital and dispensary work during a given period of service.

(3) Dispensary experience, because of its present routine nature, often reacts in a detrimental way upon the physicians forced to work for many years in the rush of dispensary practice without scientific supervision. They are likely to become wedded to practices and methods which might and often do unfit them for hospital work. Furthermore, the appointment to hospital positions of surgeons on the basis of their dispensary surgical work alone would be impractical; and finally,

(4) In certain hospitals, dispensary physicians would not be eligible for positions on the hospital staff because of the limitations of the hospital service due to racial discrimination.

Recognizing these difficulties, hospital authorities proceeded along the lines of least resistance and developed their medical organizations in both the hospital and the dispensary with the idea of meeting existing conditions and at the same time bringing about some kind of affiliation of the two medical groups, which differs from institution to institution.

As already stated, in three of the hospitals and dispensaries included in this study there is no coordination between hospital and dispensary medical organization. In the remaining dispensaries, the existing correlation can be divided into three broad groups:

(1) Attending physicians of the hospital are designated as medical directors "nominally" in charge of dispensary work. Supervision is "nominal" rather than actual, and the hospital attending physicians are not required to engage in dispensary work.

(2) Attending physicians of the hospital are designated as chiefs of clinic and are required to be in actual attendance in the dispensary. The amount of time required of them in dispensary work, however, varies widely.

(3) All dispensary physicians hold corresponding positions on the hospital medical staff, and patients admitted to the hospital from the dispensary are taken care of by the dispensary physicians. This type of organization is found only in a few dispensaries, namely, the Knapp Eye Clinics, the Manhattan Eye, Ear and Throat Hospital Dispensary, and the New York Eye and Ear Infirmary.

The first arrangement is the usual one in most out-patient departments of hospitals, but it is decidedly unsatisfactory from the standpoint of efficient administration. The members of the hospital medical staff who are made "nominally" responsible for dispensary work take little part in the medical work of the dispensary; their supervision is "nominal" in every sense of the word, and responsibility thus imposed usually means irresponsibility. The mere attachment to a dispensary medical organization of the name of a skilled physician or surgeon adds nothing to the efficiency of the dispensary.

The second system of coordination has the merit of requiring actual attendance of hospital physicians in the dispensary, but since the amount of attention which they shall give to the dispensary is not definitely fixed, the result is that they delegate their authority to others and attend the dispensary as little as possible. The end result, where attendance of such physicians in the dispensary is not definitely required, is that they become as in the arrangement first described, merely the "nominal" heads of the clinic service, without actually doing any work, either in supervision or treatment.

The third system is the most satisfactory, but its application is limited to special hospital dispensaries, such as those named above. It is possible, where the amount and nature of clinic work is limited, to give all clinic physicians an opportunty to do hospital work, an opportunity which, however, cannot be given on the same basis in large general dispensaries having a correspondingly large medical staff. In the latter institutions the inclusion of all dispensary physicians in the hospital staff would seriously hamper efficient hospital work.

A suggested plan of organization has been worked out and is presented among the recommendations of the committee.

*(d) Method of Appointment of Dispensary Physicians.*—With regard to the method of making appointments to the medical staff, the variations among the dispensaries are about the same as those which exist regarding all other administrative procedures. The responsibility for appointments is vested in chiefs of clinics, in medical boards or parts thereof, in boards of trustees or dispensary committees, in the executives or in bodies representing the several parts of the administrative organization. On the whole, it may be said that without reference to the appointive body, the method of selection, with few exceptions, is lax and bears all the earmarks of indifference. In one institution appointments are conferred without even an application blank having been filled out by the candidate.

At the Polhemus Clinic the applicant for a position on the dispensary staff applies first to the chief of the clinic in which he wishes to work. The chief of clinic makes a temporary trial of such physician's ability and may then recommend his appointment by the dispensary committee, which includes representatives of the board of governors of the hospital, medical school, and dispensary service. At the Knapp Eye Clinic physicians are appointed first as clinical assistants by the executive surgeon of the clinic. If their service is satisfactory after a period of trial, appointment as clinic physicians may be made permanent. At the New York Eye and Ear Infirmary, the medical board recommends to the board of directors the appointment of the physicians. The board of directors confers appointments of "clinic assistants" for a six months' probation period. Following an examination by the medical board at the close of this period, such appointments may be made permanent by the board of directors if the medical board approves. At the Manhattan Eye, Ear and Throat Hospital Dispensary, clinical assistants are also appointed for a six months' probation period by the board of directors on recommendation of the medical board. If the services of the clinical assistants are satisfactory, appointments may be made permanent.

In other dispensaries the procedure of appointment varies considerably. The rule is for formal appointments to be made by the board of directors, trustees, managers, or governors of the institution on the recommendation of the medical board of chief medical officers. Sometimes a special committee of the board of trustees is charged with appointing power. At the Mt. Sinai Hospital Dispensary, for example, appointments are made by a special committee—the dispensary committee of the board of trustees; at the New York Dispensary a committee on medical appointment or the board of directors is responsible for appointments. In only one of the institutions studied is full responsibility for appointment of dispensary physicians vested wholly in the superintendent, *i. e.*, the Lincoln Dispensary.

In Bellevue Hospital Dispensary, in which each of the three medical schools—Cornell, Physicians and Surgeons, and University and Bellevue—is responsible for a special division, the faculty of the medical school is required to recommend appointments to the medical board of Bellevue and Allied Hospitals, which is authorized to make appointments. In the fourth, or "open," division applications are made by physicians directly to the medical board which makes the appointments. At Cornell, the professors of the Medical College, who are nominally the heads of the various departments of the dispensary, recommend appointments to the dean of the medical school, who nominates for formal appointment by the president of the University the persons recommended. At Vanderbilt, chiefs of clinic present nominations to the faculty of the College of Physicians and Surgeons, which recommends appointment by the board of managers.

From this brief review of procedure it is apparent that there is lacking in most dispensaries a satisfactory plan for the selection of dispensary physicians. Too much is taken for granted with regard to their qualifications. The lack in the majority of dispensaries of any practical tests of a physician's competence—a probation period—prior to his appointment does not promote efficiency and is the result of the existing difficulty in inducing competent men to go into dispensary work under present conditions.

## Utilization of Interns in Dispensary Work

*(e) Utilization of Interns in Dispensary Work.*—The utilization of hospital interns in dispensaries which are out-patient departments of general hospitals is the exception rather than the rule, and in none of the general hospital dispensaries studied has a definite program of dispensary work for interns been devised. In certain of the special hospital dispensaries, however, namely, Manhattan Eye, Ear and Throat Hospital Dispensary, the New York Eye and Ear Infirmary Dispensary, the Knapp Eye Clinic, the Ruptured and Crippled Hospital Dispensary, the Manhattan Maternity Clinic, the Nursery and Child's Hospital Dispensary, and the Babies' Hospital, interns are required to do a definite amount of dispensary work as part of their course of training. In other institutions they are permitted to work in the dispensary if they so choose during their leisure, and sometimes they are called to act as substitutes for absent dispensary physicians. During the war period hospitals have found it necessary to call upon their interns for dispensary work more frequently than before, owing to the shortage of physicians. The assignment of interns to dispensary work is, however, in all cases except those mentioned, informal and occasional, and the fact is that the interns do not spend any time in the dispensary if they can avoid it. In some institutions the authorities, recognizing the inferior quality of work in the out-patient departments, consider the service in the dispensary on the part of the intern as injurious to his training. A certain amount of routine work in a dispensary is undoubtedly valuable experience for every intern, as the relationship of the intern and patient in the dispensary is quite different from that of the intern and the patient in the hospital. In the latter instance the patient is in bed under a régime and subject at all times to observation and control. The dispensary patient is an individual whose personal peculiarities, habits, home environment, and social and economic relations must oftentimes be studied and adjusted. Dispensary practice, when of an acceptable character, has a broadening effect and comes nearer the type of practice which will engage the average intern's attention when he becomes a practitioner. A plan of rotation of intern service between hospital and dispensary presents no insurmountable difficulties. It might be necessary to increase the number of interns in certain institutions so that the hospital needs could be fully provided for. While some institutions would have no difficulty, it would probably be difficult to secure a sufficient number of interns in all institutions.

(To be continued.)

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**A sponge to wipe out the Past; a rose to make the Present fragrant; and a kiss to salute the Future.—Hindu proverb.**

# HEALTH AND MODERN INDUSTRY

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## HEALTH SERVICE FOR INDUSTRIES OF MODERATE SIZE

By ALFRED E. SHIPLEY, M.D., D.P.H., Director of the New York Industrial Health Bureau.

In the beginning, the phase of industrial health work which received principal consideration in industry was first aid, or emergency measures. Preventive health measures, however, soon followed as a logical sequence, for two reasons: first, their application reduced the emergency needs, and second, preventive measures, intelligently applied, had a direct effect upon the efficiency of the workers and the output of products. When these results were apparent, the field of industrial health service broadened into a well balanced program embracing clinical and preventive medicine and surgery.

Such a complete service, however, has been limited until recently to the large industrial corporations. Because of their great size and their methods of organization, these plants have developed their own medical or health departments under competent and well paid medical directors, and have employed an adequate staff of physicians, nurses, and sanitarians.

Health supervision, if of any value in industry, is, of course, just as necessary in the moderate sized and smaller plants as in the larger corporations. Many of the smaller concerns recognize the value of health supervision of their employees, but do not see how they are going to secure a service of a competent character commensurate with their size and needs. Yet the sum total of people employed in these smaller industries far exceeds the number engaged in the large corporations. Mock states that approximately 8,000,000 of the workers of the nation are under health supervision, but there still remain 30,000,000 of our people who are responsible for production of some type in this country who are not covered.

Adequate health service must in some way be provided for these smaller industries. There are, in general, three ways in which this health service may be rendered:

(1) By the haphazard method used in some factories, of referring the cases to the office of some local physician, or else of calling him to the plant when his services are needed. This cannot meet the situation, for as a rule the doctor looks upon the work as more or less incidental and is not thinking in industrial terms. To him the case is merely another medical or surgical one; he does not see the relation of the injured or ill worker to his job. Furthermore, health work must be followed up regularly and persistently to give best results. An incidental service of this character will be found inefficient and in the long run very expensive.

(2) By all of the industrial establishments of a given community combining to support a service for their own needs. This is the ideal and statesmanlike way of solving the problem, but to do this effectively, the establishments must be fairly well concentrated, and favorable conditions of this kind do not obtain with the majority of industries.

(3) By the organization of private industrial health companies or bureaus, such as the one of which the writer is director, which should be able to give industrial establishments a competent service on a part time basis, according to their size and needs. Organizations of this type have a large field of usefulness.

### Health Bureau Organization

Such bureaus should be prepared to give to industrial and mercantile concerns, a well balanced medical, surgical, and sanitary service, which combines the emergency and preventive features in such manner as to produce the most effective results at minimum cost.

The field force should be under the direction and immediate supervision of men qualified by vast experience in the fields of medicine and sanitation, in order to insure performance of technical service of the highest character. Futhermore, the staff at headquarters should be constantly analyzing the work performed by the field force, and planning and developing new and more effective means of securing results. This overhead service should be available to all of the establishments for whom the bureau is giving service, thus assuring to the smallest industry all the advantages which the largest corporation can secure through the employment of full-time, high salaried industrial health directors.

The field force should include physicians, surgeons, industrial hygienists and sanitarians, nurses and nurses' assistants, and home workers. When the needs of a factory have been determined, the service should be arranged so that maximum results are obtained at minimum cost. For instance, the work of the physicians should be limited to the technical medical and surgical work, leaving to the nurses re-dressings of surgical cases and similar duties. Again, in making physical examinations, the physician should not be required to write up the record cards; the nurse or some other assistant should do this work. Many of the minor nursing needs can be done by nurses' assistants provided they are under the close supervision of a trained nurse. In fact, the development of our trained nurses into supervisors over forces of practical assistants is, in the opinion of the writer, the solution of the problem of meeting the growing demand for nursing service in the industrial and other public health fields.

Careful thought and attention must be given to this matter of duties to be performed by the field staff, for it means the difference between a wasteful and an economical service. As a rule business does not object to spending money for service rendered, but it does insist upon getting its money's worth.

Very few industries will be prepared to take up a complete health service at once. In fact, the evolution of the work as a whole, will apply to the individual plant. That is to say, a factory usually installs a clinic room at first to care for its emergency work, and finding it pays, adds the preventive features gradually until a complete service is in operation. It is well, however, to place before the officers of an industrial plant, an outline showing what a comprehensive program includes, because very few managers of factories know definitely what health work means. For practical purposes the writer uses the following outline:

The service is of three kinds:

(A) First Aid and Emergency Measures.

(B) Preventive Measures.

(C) General Administrative Measures.

(A)—*First Aid and Emergency Measures.*

This includes those features which are necessary in caring for sickness and accident cases in the factory and the homes of the employees, such as

(a) Daily visits to the factory by physicians or nurses or both, to attend to emergency cases.

(b) Arrangements for hospital care when this is necessary.

(c) Visits to homes of employees who are sick or injured.

(d) Dental service if desired.

(B)—*Preventive Measures.*

This embraces features which aim to forestall accident or sickness; to bring about better conditions of health of employees; and to show workers how to obtain better results with the proper expenditure of energy. These features are—

(a) Medical examinations for employment—to discover and correct physical defects which would be detrimental to the worker and to the employer, such as hernia, weak heart, defective vision or hearing.

(b) Periodic medical examinations to prevent disease—to discover in their incipiency, abnormal health conditions which would disqualify a valuable worker if allowed to develop. In this way also infectious diseases may be discovered, dangerous to the individual or to his fellow-workers with whom he is in daily contact.

(c) Supervision of factory sanitation and hygiene—which protects the workers and keeps them in the best physical condition, with resultant benefit to themselves and to the company for which they work. These measures include proper light, ventilation, toilet and washing facilities, and personal hygiene.

(d) Reduction of industrial health hazards—by careful study and observation of the effect of materials used and methods employed by the various employees in their work, and the correction of conditions found to be detrimental.

(e) Inspections to reduce accidents—to insure the proper attention and attitude of the workers themselves, without which accidents will occur despite the installation of safety devices.

(f) Study of work methods—in so far as they relate to the physical condition of the workers themselves, such as faulty postures while at work, fatigue produced by prolonged or improper muscular motions, improper height of work benches, and similar matters.

(g) Health education features—such as group talks, health exhibits, bulletins and pamphlets, moving pictures, and especially personal talks to individuals who need such attention.

(h) Investigation of home environment—to discover and suggest correction of conditions which impair the physical condition of an employee, with resultant loss to himself, his family, and his employer.

(i) Maintenance of proper records of service given with analyses and deductions therefrom to guide in securing results.

(C)—*General Administrative Measures.*

This includes those features such as the correlation of data from the various industries, their analysis, and the application of principles and new facts discovered therefrom. Some of these features are—

(a) Close and constant supervision of the field force of physicians, nurses, and home workers.

(b) Compilation and analysis of records and other data for use by the industries, which are thus enabled to compare their work and results with that obtained in other plants.

(c) Advice and testimony re law suits, such as the evaluation of injuries or physical conditions, and the determination of lessened earning capacity.

(d) Follow-up of the various procedures incidental to the Workmen's Compensation law.

(e) Professional opinion and advice as to industrial health requirements and laws, with supervision of their application in the factories.

(f) Current information as to new laws, latest literature, and new features with respect to industrial health.

## Essentials of Clinic Service

The installation and equipment of the clinic room will depend to a considerable extent upon conditions in each factory. Many places are in need of more space for production purposes, and can ill afford room for starting a clinic. Considerable thought, therefore, must be given to a more or less standardized arrangement and equipment of the clinic room which will adapt itself to contraction or expansion to meet conditions. Then, too, the equipment must be suited for industrial work. Beautiful white furniture is ideal, but not always practical. The writer well remembers one of the first industrial clinics which he equipped in a rubber manufacturing plant. White enamel furniture had been purchased, including chairs and stools, and their appearance after use for a week during which rubber cement from the clothes of the workmen had been smeared on them, was pitiful to behold. Efforts to remove this rubber cement only made their appearance worse.

If space is very limited, a room 10x15 feet can be made to answer for clinical purposes. The necessary furniture, work equipment which includes instruments and medical and surgical supplies, and incidentals can be purchased for about $250, but, of course, this equipment is by no means elaborate. It will do, however, until the service has proven its value, and experience shows that factories are willing to invest money after they are convinced that it pays.

In the administration of the clinic, a sufficient stock of supplies should be maintained currently by taking inventories at stated periods, say once a month. In the treatment of patients, it should be so planned that the least possible time is taken away from their work. A definite hour or hours at which patients are to be seen at the clinic should be established, and appointments thereto made at certain intervals. Experience shows that five minute intervals between appointments is sufficient, as an average, to care for the clinic needs. Apart from the emergency cases which of course occur at all times during the work-day, these stated hours should be observed very strictly. By these appointments, the possibility of many employees' waiting for attention at the same time is avoided, thus preventing waste of time.

It is hardly necessary to say that careful consideration should be given to each patient who comes to the clinic. The industrial physician has unusual opportunities to gain the confidence of the workers, provided he secures the respect of the employees. If he does this, he will become an important part in the development of better industrial relations between the employee and the management. Such relations, however, will not be secured by treating the employees merely as part of a big industrial machine, as some physicians engaged in this work have done in former years. Men of this kind are contemptuously referred to as "Company doctors," and their inconsiderate treatment of workers in some of these plants has left impressions which require the utmost tact of the modern industrial physician to efface.

## Character of Physical Examination

The physical examination of new or regular employees should be of a practical character, that is, covering those physical conditions which apply to the industrial life of the individual, and to the company employing him. Enthusiasm for research work should not lead the physician into the fields of medicine which do not directly concern the industrial life of the worker. With knowledge of previous employment, and of the work the applicant is about to take up, the physician should pay special attention to physical conditions directly concerned with the job to be filled. For instance, needle workers require careful eye tests, lead workers special inspections of the teeth, laborers required to do heavy lifting, close examinations for weak inguinal rings, and workers who are on their feet all day, inspection for flat feet.

In the majority of cases, physical defects discovered can be corrected so as to enable workers to take up the vocations for which they have applied, and not be handicapped as to their working ability and earning power. In those few cases where it is necessary to reject applicants because of defects, the conditions found should be explained frankly, and suggestions made as to the kind of work which would be suitable and safe. A flat rejection without explanation leaves the individual full of doubt and dread, and is not fair to the man.

## Sanitary Survey Essential

A complete sanitary survey should be made at the time the service is installed. This should be done separately for each room or group of rooms in which a given process of the industry is being performed. While general sanitary measures, such as toilet and washing facilities, apply to all parts of the plant, the various processes create environmental conditions which differ to a marked degree in the rooms where they are housed. For example, processes in which steam is employed give rise to excessive humidity and have a different effect upon the workers than processes necessitating dry heat. Proper lighting for needle and office workers is of greater importance to them than to a group of employees in a shipping department.

A sanitary survey should include attention to environmental conditions, which, as the name implies, have to do with the surroundings of the workers, and to personal factors, or those which evidence themselves directly upon the workers. The writer in his service includes the following factors in his survey. Each of these factors is considered from many angles, but these details are not given here. For instance, under ventilation, consideration is given to the method used, its adequacy, dust, gases and fumes, free flames without vents, still air, ventilation of the various processes, and air tests. In this way the survey is made in the following order:

**Environment**—1, floors; 2, walls; 3, ceilings; 4, windows; 5, lighting; 6, ventilation; 7, temperature; 8, sweeping; 9, safety devices; 10, chairs, work benches, etc.; 11, toilets; 12, washing facilities; 13, drinking water; 14, lockers; 15, dust; 16, dirt; 17, disorder; 18, poisons.

**Personal**—The effect of conditions upon the worker as to 1, eyes; 2, ears; 3, nose; 4, mouth; 5, skin; 6, scalp; 7, hands; 8, miscellaneous physical effects such as cough, anaemia, etc.; 9, clothing; 10, inactivity; 11, fatigue; 12, injuries; 13, poisons; 14, infections.

A complete and thorough survey of this character at once brings out defective or improper conditions which should be remedied promptly, or discovers the use of improper methods which should be corrected. At certain intervals, either weekly or monthly, sanitary inspections should be made by a physician or a sanitarian, which cover in a general way the points just outlined, and give special attention to features which previous inspections have found necessary to follow up more closely. In addition, the regular duties of the nurse should include a daily sanitary inspection covering general features, such as cleanliness of the rooms and toilets, proper ventilation, etc.

The prevention of accidents is effected to a large degree through the use of adequate guards and other appliances, and therefore is a matter primarily under the jurisdiction of the engineering force or department of an industry. Nevertheless, carelessness or inattention on the part of the workers, or poor physical conditions, such as defective vision or fatigue, result in accidents despite the use of safety devices, so that the prevention of accidents calls for the closest cooperation between the engineering and the health services. Many of the liability insurance companies who insure industrial establishments against accident claims which come under the Workmen's Compensation law, allow a considerable reduction in the premiums when the safety and first aid services are well organized.

## Health Education Valuable

Health Education is an important phase of industrial health work, and may be provided in several ways. The appeal to the individual is, perhaps, the most effective method; therefore the clinic should be used to full advantage by giving advice of special and general character to the patients as they come under the observation of the doctor and the nurse. In the course of a period of six months, it is surprising how many different individuals are seen at the clinic—a majority of the workers at least.

Talks to groups can be given at the noon hour or other times. However, formal gatherings of this kind are not as effective as are informal chats on appropriate health topics addressed to groups of workers while they are busy at their tasks. For instance, a talk to needle workers on the care of the eyes, while they are busy at work, enables the physician to point out individual faults; the subject is thus driven home more forcibly.

Health exhibits covering industrial subjects, accidents, and home and social conditions directly or indirectly affecting the working ability of the employee, can be displayed in prominent parts of the factory. These exhibits are more effective if they are changed frequently or are shifted from place to place as a circulating library.

Bulletins on seasonal topics can be posted on bulletin boards or mimeographed for general distribution. In the various plants under the direction of the writer such bulletins were distributed to each employee during the recent

influenza and grippe epidemic. In one of the plants twenty-four health assistants, employees, selected from the various rooms of the factory, to aid in the conduct of health matters, were called together, and a number of these bulletins given to each one for distribution to the employees in his room, before the close of the day's work. By such organization, information and warnings can be communicated very rapidly to all of the twelve hundred workers in that plant. As the workers were urged to take these bulletins home to their families, it is safe to say that four to five thousand people were reached just through the work in this one plant. The value of such work as supplementary to the health department's efforts in any community is very apparent.

Pamphlets on industrial health topics should be placed on tables easily accessible to the workers, such as those in the waiting room to the clinic or in the main entrance hall for employees. This is more tactful and effective than forcing the pamphlets upon the attention of the workers, who often resent such actions.

Moving pictures of an industrial health type are very few so far, but where a factory is using a moving picture apparatus in its general education program, these health films can be included to advantage.

### Proper Record-Keeping Important

The installation and maintenance of proper records are just as important for health work as they are for other service phases of industry. They furnish the guide posts by which to estimate the results of work performed, as well as the basis for expanding the service intelligently. These records should be as simple as possible, yet should furnish sufficient data for proper analysis. In the service of the writer, the following forms and records are included:

1. Daily clinic sheet showing number of patients, name of each, the department in which each works, whether medical or surgical case, new or return case, the diagnosis and action taken.
2. Clinic appointment card, sent early in the morning by the foreman of the department where the employee works, to the nurse for appointment with the doctor.
3. Clinic appointment sheet, arranged by five minute intervals, for use by the nurse.
4. Individual history card, kept for each employee requiring clinic or home visit attention. Chronologically details the various conditions requiring attention (transcribed from the daily clinic sheets) and the visits to absentees.
5. Medical examination card, giving industrial health history of the new employee, with a record of conditions found on physical examination. This form is used also for recording examinations of regular employees.
6. Accident report card, showing date and time of accident, where and how it occurred, nature of injury, disposition of case, progress of case, return to work, and final termination
7. Report of accident to Compensation Commission as required by law.
8. Daily reports of sanitary inspections made by nurse, covering features such as floors, walls, ceilings, toilets, washing facilities, ventilation, thermometer readings, condition of first aid kits or jars, in the various departments.
9. Report of periodic inspections by sanitarian.
10. Daily absence report presenting statistics concerning absence due to sickness, and due to other causes.
11. Report of absentee visits, with results and information secured.
12. Monthly summary of clinic work, showing cases seen each day.
13. Monthly summary of clinic work, grouped into medical and surgical cases, new and return, whether seen by physician, nurse, or health assistant.
14. Monthly analysis of clinic work, divided by departments, showing various kinds of medical and surgical cases, with proper percentages for purposes of comparison.
15. Monthly analysis of accidents, showing character, distribution, etc.
16. Monthly summary of physical examinations, showing defects found, proportion to number examined, etc.
17. Nurse's daily report, showing time spent at clinic, making up supplies, sanitary inspections, absentee visits, and clerical work.
18. Monthly summary of nurse's daily reports.
19. Physician's report either daily or weekly, divided in similar manner.
20. Monthly summary of preceding.
21. Record of medical and surgical supplies purchased, and required to be on hand.
22. Monthly inventory of equipment and supplies on hand.
23. Monthly report of the Health Service to the company.

A standardized system of records used by many industries enables fair comparison of the work of one factory with another. In a bureau system of health service such as the one being described, a fair comparison of the work performed in the various plants is therefore possible, and the correlation of such data leads to general conclusions which can be applied with benefit to all the industries concerned.

To be successful, health work in any industry, large or small, must recognize its intimate relation to all other phases of personnel work, of which it is only a part. While the service now recognized under this title of personnel has only been segregated as such within the past few years, still it is sufficiently organized to show its division into four main phases, viz., employment, health and safety, general employee service such as recreation, lunch rooms, libraries, mutual benefit funds, etc., and finally, the cultivation of better industrial relations through shop committees, works councils and similar organizations. The mere mention of these activities, is sufficient without going into details to show how closely the health service is tied up with them. In fact, industrial organization is very complex, and, like the human body, each part is related to and dependent upon all others. This is why the physician or nurse who wants to take up industrial health work must get away from thinking in terms of the individual exclusively, and think along group and community lines.

## WORK OF POLISH GREY SAMARITANS

The first unit of twenty Polish Grey Samaritans, a group of Polish American girls who are doing social service work in Poland, has taken charge of the nurseries in Warsaw, and succeeded in lowering the death rate the first three weeks they were there. They have also established soup kitchens under the Polish Government at which they feed hundreds of under-nourished children daily. These Samaritans are girls trained in this work who were moved by the pitiful conditions in their mother country to go back and share with their people the benefits which they have derived from American education and opportunities.

# OCCUPATIONAL THERAPY, VOCATIONAL RE-EDUCATION AND INDUSTRIAL REHABILITATION

*Conducted by* DOUGLAS C. MCMURTRIE, Secretary Institute for Crippled and Disabled Men and MRS. CARL HENRY DAVIS, Adviser in Occupational Therapy, 2929 Broadway, New York City

## MENTAL RECONSTRUCTION THROUGH OCCUPATIONAL THERAPY

BY META L. ANDERSON, Supervisor, Binet Classes, Schools and Classes for Defectives, Newark, New Jersey; Head Reconstruction Aide Hospital 214, A. E. F.

"There are but two things in the treatment of these cases," said a medical director of high standing, when speaking of the so-called "shell-shocked" cases in the psychiatric hospitals of the American Expeditionary Forces, "and they are suggestion and occupation."

If this statement is true, occupational therapeutic treatment deserves the keenest consideration from everyone working with these cases, and the highest skill on the part of the occupational workers.

In order to work intelligently in the occupational field, the workers must ever bear in mind the ultimate purposes of the work. In order to assist their patients in getting the most possible out of the work, the physician must know, when he gives them their assignments, what help he expects them to get. The aims, therefore, are frequently individual, and differ with various cases.

Generally speaking, however, the aims for the various groups of cases may be fairly closely defined. To the so-called "shell-shocks" cases, found in the psychiatric hospitals of the A. E. F., who come to the occupational work thinking they are blind, deaf, mute, paralyzed, and generally unfit, work must be given which will send them out with full use of their bodies and with a greater feeling of power to meet the problems of life. To the curable insane patients, work must be given which will help to reconstruct them mentally, and which will help them to re-enter society and keep their footing among the uncertainties of existence in a more or less complex life. For the incurable insane, work must be found which will render them more stable and less of a menace to the community. To the feebleminded, work must be given which will definitely train and fit them to take their places in the industrial life of the community.

The fact that many members of all of these groups will enter the industrial world is to be recognized, and it is for the workers to accept this fact and meet the conditions with constructive work. What, then, are the principles underlying constructive work which will meet these conditions?

In general there are two essential features of successful occupational work; it should be adapted to the environment, and it should inspire in the patient the feeling of pleasure and self-respect which comes from being useful, and the feeling of power which comes from progressive daily achievement.

### Work Adapted to Environment

Occupational work should not be a thing too much apart from the rest of the world in which the patient lives, whether this be in the environment of an institution, a hospital in the A. E. F., or a part of the public school system. The work will have a much more vital interest for the patient if in some way it has immediate bearing upon his daily life.

As an example of the adapting of work to environment, the practice in the psychiatric hospitals in France may be cited. When Base Hospital 214 moved to its new quarters, the buildings lacked many conveniences which would have made life there more comfortable. The shop, as was named the place where the occupational work was carried on, was called upon to meet the emergency, and met it excellently. In the shop the patients made desks, tables, filing cabinets, and letter trays for the offices; they made medicine cabinets, tables, ash trays, and decorations for the wards; they made writing-paper racks, sideboards, arm-chairs, and tables for the recreation huts. That the pressure exerted on the workers to furnish all these things and many more was very heavy is undoubtedly true; but that this pressure had marvelous therapeutic value when it was passed on to the patients in such a way as to become a definite force in their mental and physical upbuilding, cannot be denied. The patient's knowledge that the work he was doing was making the hospital of which he was a part a more comfortable place in which to live, furnished an incentive which often lead to his doing a normal day's work; and the satisfaction which he felt at the productivity of his efforts reacted most beneficially upon his mind and health.

### Progressive Achievement Aim of Work

Occupational work which has for its aims usefulness, and progressive daily achievement, produces excellent results in the patients.

A great teacher once said that all the desires of the race mind could be reduced to the desire for health, wealth, love, and usefulness; and surely usefulness will hold its own with the rest of the group. As a striking example of the pleasure that useful service may bring, the following story of a feebleminded child may be told:

An official was visiting the work of the feebleminded in a certain school. The teacher reported the good work done by the various children. When she had finished, a low grade girl member of the class tugged at her sleeve and said, "Tell him that I cleaned the garbage can." She had cleaned the garbage can and had done it very well. She beamed over the praise given to her after she had called attention to her accomplishment. She had been useful and her joy was unbounded. Before she had learned to clean garbage cans and sinks there had been nothing for her to offer the world. Now that she could do this, the world, the part of it found in an institution at least, could use her services and she had something to give her world.

In general, occupational work which increases the patient's capability, increases his self-respect, inspires a healthy pride in accomplishment, and raises the standard of his endeavor. Col. Salmon quotes Dr. Miller in his article on "shell-shock," as saying, "shell-shock produces a condition which is essentially childish and infantile in its nature. Rest in bed and simple encouragement are not enough to educate a child. Progressive daily achievement is the only way whereby manhood and self-respect can be gained."

The occupational work of the feebleminded should be determined by the kind of work we expect them to do in the community, or in the institution where they live. There is no possibility of the feebleminded going into the professions, and very little chance of their going into the skilled trades. The ranks of the "odd jobbers," and unskilled workers must be filled by the mental defectives of society. The occupational work must fit them then, for this, their life-work.

One of the disturbing features met when working with mental cases, in general, and with feebleminded cases, in particular, is that the patient, upon encountering some slight difficulty, is ready to cease work. It is not uncommon to hear some one say, "This plane is no good. It will not work," and then to investigate and find that the only difficulty with the plane is that it requires an extra push to have it accomplish its purpose. The old saying that only the poor worker complains of his tools, is applicable in the case of mental patients for, as a matter of fact, it is to be doubted whether anyone could complain more of poor tools than the feebleminded, or mental patients. Investigation invariably proves that some slight difficulty has arisen which we would never hear of from normal people. If the story of "Why the Feebleminded Lose Their Jobs," could be written, the text would be the history of "insurmountable" difficulties for them. One left a good job in a phonograph factory because the needles "hurt his fingers." When asked if the needles hurt the fingers of the other boys who worked there, he said they did not. The fact that the needles hurt *his* fingers proved too great an obstacle for him.

In dealing with these cases it is essential that the patient be trained to meet these slight difficulties in order that he may grow in power to meet greater difficulties when they arise. Thus, occupational work must be selected which involves progressive daily achievement in the mastery of minor difficulties and in the performance of increasingly difficult tasks.

## Types of Work Found Useful

There are many kinds of occupational work, all of them perhaps good, when used in the right place and with the right cases. Those which have been found to be useful, especially when used with groups of cases, are wood work, metal work, loom weaving (foot), sewing, basketry, raffia work, and brush making.

A worker who handled the wood working end of the shop in a psychiatric hospital overseas said to me, "You know, I think I have the best type of workers in the shop, in my department." We thought it over and her statement appeared to be true. The patients in the wood work did seem to be less fearful of hard work, and more ready on the whole to do a day's work. However, whether or not the conclusion the worker drew in connection with her work be true, the fact remains that wood work seems to be a very important part of occupational work for nervous, insane, or feebleminded patients. There is very little "bluff" in woodwork. Either an article stands true or it does not, either a board is straight or it is not, either an article is useful because it is made right, or it is useless because it is made wrong. Wood work, using as it does the big muscles, accomplishes much for the physical and mental upbuilding of patients whose bodies are healthy and strong and full of energy, and whose minds are incapable of handling those bodies or of directing those energies.

Much of what has been said of wood work, may likewise be said of metal work. Metal working, while using the big muscles, also uses many of the finer coördinations as well. Metal work is noisy. This fact may make it a disadvantage to other members of the group, but there appears to be an actual therapeutic value in the noise to many of the patients working with the metal themselves. One patient said, while hammering heavily and noisily on a piece of copper, "I enjoy hammering this copper because all the while I am doing it, I am thinking that I am hammering Major ————'s head." Work of that kind gave vent for her temper as well as for her energies, without the disastrous results which sometimes come from a show of both in other directions.

The foot looms are especially helpful for patients who need work which requires muscular coördination. Foot power scroll saws and sewing machines are helpful for this purpose also.

The work involving the smaller muscles and employing the finer coördinations, such as the basketry, raffia, brush making, book binding, and so on through all kinds of occupational work, are useful and, in fact, invaluable for patients ready for that work. The occupational workers must be so trained that they will know when patients are ready for the various kinds of work.

## Training of Workers Haphazard

If one is to judge by the many failures and the few successes found among the occupational therapeutists in psychiatric cases, it would seem that training for this work has been done in a haphazard manner. In fact investigation seems to show that many of those who are training workers, have themselves, never had the slightest experience in training or treating mental cases through occupational therapy. In that case, very naturally, instructors emphasize the work they know best—to wit, the making of baskets, bags, toys, and what not. Occupational work thus used becomes at best merely an anesthetic to keep patients quiet a part of the day, but in results on the patient, it does not compare with the occupational work which has for its aims usefulness, and "progressive daily achievement."

Apparently only expert workers realize that the making of tables, toys, art objects, and in fact all occupations used by the occupational therapeutists, are merely the means to the great end of mental construction, in the case of those mentally affected from birth, and of mental reconstruction for those who were once normal and now need to be restored.

An artist who undertakes occupational therapy, will say, "You cannot tell me that there is not training in the production of this or that beautiful picture or object." There may be, and there may not be. It quite depends on the patient. The artist must be capable of subordinating her desire for the production of a beautiful object to the thing, however crude it may be, which will most help in the treatment of the patient. Her psychological or psychiatric training must overbalance her artistic training, so that she will see the patient's needs before she sees art productions.

# VENEREAL DISEASES AND THE HOSPITAL

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## TREATMENT OF PATIENT IN VENEREAL DISEASE CLINIC

By H. E. KLEINSCHMIDT, M.D.

A few years ago the task of controlling the spread of venereal disease seemed a hopeless one. Today the problem gives promise of being solved through the application of a comprehensive, practicable public health program. Because the war has served to focus attention on the problem, the whole country has been stimulated to enter the peace-time fight of combating venereal disease. The well rounded program adopted and put into practice by the army, navy, and Public Health Service, consisting of law enforcement, provision of recreation and entertainment, education, medical prophylaxis, and treatment, has proved its worth and is being generally, almost universally, accepted.

The relative values of these several factors are indeterminable, but the medically trained man requires no arguments to convince himself of the importance of providing facilities for scientific diagnosis and adequate treatment for all known and suspected carriers of venereal infection. The venereal disease clinic is established primarily as a public health measure in an attempt to gain control of carriers, thereby curbing the spread of disease; and not merely to relieve the suffering and distress of individual patients, commendable as that objective may be.

To insure the success of the diagnostic and therapeutic attack, certain requisites must be provided. Thus financial backing, guaranteeing the maintenance of the clinic through and beyond its experimental stage, is necessary, and fortunately such backing is now made available through the Public Health Service, state boards of health, and private organizations. The need of modern, but not necessarily elaborate equipment, is generally appreciated. Unless facilities such as the dark stage microscope, serological laboratory, diagnostic and treatment instruments of precision, are available, a clinic can hardly measure up to the modern standard. The business side of operating the clinic is usually given due emphasis and social service follow-up work has established its claim for recognition.

The provision of facilities not absolutely necessary for good scientific treatment but desirable for the comfort and general well-being of the patients is often neglected. For instance, it is rare to find a clinic where arrangements for segregating men and women in the waiting rooms have been made. Such a plan is highly desirable and, at least in the south, there should also be separate waiting rooms for whites and negroes. Where space is not to be had, clinic hours can be so arranged as to make one reception room serve without the necessity of entertaining patients of both sexes and all races at the same time.

In the treatment room a feature highly appreciated by patients is privacy. In private practice the physician is usually punctilious in insuring absolute privacy in the consultation room, but in the clinic the attendants are frequently careless in this regard. In a busy clinic where it is necessary to handle large numbers of patients with dispatch and where a sufficient number of rooms is not to be had, a liberal use of screens or curtains may suffice. The advertising specialist has long ago realized the value of catering to his patrons by promising privacy in all his relations toward them.

The average patron of the public clinic may or may not appreciate godliness, but it is certain that he does value cleanliness highly. He is entitled to surgical as well as the grosser kinds of cleanliness. The consistently scientific doctor carries his "aseptic conscience" with him wherever he goes, but occasionally one finds attendants in public clinics who have succeeded in smothering this conscience into unconsciousness. The writer once observed in a clinic of reputable standing a physician examining a number of venereal patients. After stripping back the prepuce of one patient for examination, he went directly to the next and without so much as washing his hands, palpated the forehead, lips, and neck. True, this doctor took the precaution of wearing rubber gloves for his own protection and it happened that patient number one was free from any lesion, but what about the violation of the aesthetic feelings of patient number two? Cleanliness in medical and surgical practice implies adequate equipment, but even with poor facilities, the ordinary technics can be carried out according to the rules of surgical cleanliness.

Perhaps the one factor on which more than on any other hinges success or failure of the clinic, is its man power. Advances in urology and syphilology have been so rapid in the last decade that only the physician who has kept stride with progress is competent to grace the staff of the clinic. But aside from the scientific qualifications of members of the staff, there is another consideration, the importance of which is too frequently overlooked, namely, the personal or social attitude of the doctor toward the patient. Many a physician becomes so engrossed in the treatment of the patient's *disease* that he is likely to overlook the treatment of the patient *himself*. Every patient is a "case," and as such should be critically, impersonally, and objectively studied with the same interest as is employed by the biologist in examining a newly-discovered beetle. Every patient is also a tangled bundle of opinions, prejudices, sensibilities, likes, and dislikes, which bundle no psychologist has yet succeeded in unraveling. He resents being treated as a mere specimen. He has come specifically to seek physical relief, but desires also human sympathy and understanding. He craves

the good will and favorable opinion of the doctor and offers his friendship in return, for in the doctor he has found one who has a real understanding of his physical distress or difficulty. He is entitled to all the courtesy and consideration which one man owes his fellow man.

Scores of discharged soldiers and sailors have complained of the treatment received at the hands of medical officers. These men may be laboring under a delusion but nevertheless their impressions will be carried back into their communities and will not soon be forgotten. For example, the "c.c. pill" has become a standing joke with many soldiers, representing in their minds the army's panacea for all ills to which a doughboy may be heir. From the medical viewpoint the administration of a preliminary cathartic, pending further developments, is of course, good treatment, but if the patient is left with the impression that the treatment was unscientific and a mere method of getting rid of him, who can blame him for making damaging charges? Taking into consideration the demands of discipline, the pressure of time under which many medical officers were working, the annoyance occasioned by the malingerer, and other circumstances unknown to the patient, these charges probably are not justifiable. What is considered as harshness by the patient, may have been only misinterpretation of military usage or discipline on the part of the officer. It is regrettable, however, that such misunderstandings have been established.

Instances of harsh personal treatment are sometimes observed in civilian clinics. This seems to be more noticeable among physicians who have had postgraduate training in German or Austrian schools, and is but a reflection of the autocratic, impersonal methods generally prevailing in continental clinics which are attended largely by ignorant and helpless peasants.

In venereal disease clinics medical attendants sometimes make the mistake of allowing a careless or even lewd element to creep into the dealings with the patient. Crude jokes, be they ever so artistically dressed up, are reprehensible and should never be tolerated in any dispensary. Because many of the female patients may be hardened prostitutes, is no reason why the doctor should jeopardize his dignity or risk insulting a respectable woman. The fact that many of the male patients are unscrupulous "rounders" is no excuse for allowing salacious stories or undignified language in the clinic.

Common etiquette, therefore, is reason enough for maintaining a dignified, respectful relation between patient, doctor, nurse, and orderly. But there are other valid reasons as well. First, there is to be taken into account the psychological effect on the patient. Numerous investigators have called attention to the close relations existing between mental influences and physiological processes. The psychical attitude of the patient has a direct bearing on purely physical reactions. Is it too far fetched to maintain that thoughtful, courteous personal treatment of the patient will be of material benefit to the therapeutic treatment administered?

Again, the importance of holding the patient should be emphasized. If the maintenance of the venereal clinic has for its purpose that of limiting the spread of venereal disease by rendering active carriers non-infectious, it is highly important that these carriers be held for treatment until cured, or at least until they are in a non-infectious state. It is a great mistake unwittingly or purposely to drive off a patient because of a lack of thoughtfulness on the part of clinic attendants. Even the dry goods merchant, the green grocer, the shoe-string peddler, realizes that unless he secures the friendly confidence of his customer, he will not long hold his trade. The physician should realize that he owes it to the clinic as an obligation to the public welfare to do everything in his power to hold the patient until cured.

Building up and sustaining the good reputation of a clinic is a responsibility resting especially on the members of the staff. It is certainly not unethical to advertise the clinic through the patients. How better could this be accomplished than by fostering the friendly good-will of the patrons! A grateful patient is a walking, talking advertisement for the public clinic, more efficient even than the familiar sandwich man. In certain civilian clinics maintained during the war for the treatment of venereal disease, it was observed that the majority of the patients were there because of the personal solicitation of some individual on whom a favorable impression had been made.

To fulfill its high mission, the public clinic should be more than a treatment station. Those who have come to seek relief are for the most part persons who, perhaps, have suffered deep remorse because of a misstep and are keenly responsive to any method which will assist in combating venereal diseases as a social evil. The male patient, after his unfortunate experience, will be more than willing so to instruct his sons, if he has them, that they shall not fall into the same trap. The young woman who has suffered a bitter personal experience because of previous ignorance of venereal disease can easily be made a propagandist of social hygiene. In the clinic, then, is a select group which should be educated to the end that information concerning the spread and prevention of venereal disease may be widely disseminated. Unless the clinic is kept on a high moral and social plane, this important objective will not be achieved.

A final reason for maintaining a correct social atmosphere in the venereal disease clinic is that the dignity of the profession should be most scrupulously upheld here as everywhere else. The reputation of the medical profession must not suffer because of carelessness or thoughtlessness on the part of clinic attendants. The severe criticisms and satires of such writers as Shaw, Hubbard, and others who have a wide following, aimed at members of the medical profession, are the result not so much of the scientific shortcomings of the doctor as they are of his social relations with the patient and the public. Perhaps most of the *'paths* and *'isms* would never have taken root had trained medical men paid more attention to the ordinary human relationships with those who had so little understanding of scientific medicine, and failed, therefore, to comprehend what seemed to them the foibles, inconsistencies, and weaknesses of doctors. The medical staff of the public venereal disease clinic can do much to demonstrate that medicine is, as is so frequently affirmed but seldom accepted, *a noble profession.* —*Social Hygiene.*

## STATE BOARD QUESTIONS HOSPITALS ON VENEREAL CASES

The State Board of Charities and Corrections of Maine, under date of January 12, 1920, sent a circular letter to the hospitals, inviting their attention to the regulation of the State Board of Health. As this circular presents the subject of discrimination in regard to venereal disease cases in a general hospital rather clearly, it is felt that the readers of THE MODERN HOSPITAL will be interested, and it is hoped will want to express opinions pro and con. It follows:

STATE BOARD OF CHARITIES AND CORRECTIONS
*Ex-officio*
STATE BOARD OF MOTHERS' AID AND CHILDREN'S GUARDIANS
Circular No. 50. Augusta, January 12, 1920.

VENEREAL DISEASES

*Extract from Regulations of the State Department of Health.*

"Sec. 3. No discrimination shall be made against the reception and treatment of venereal disease cases in any general hospital, supported in part or in whole by municipal, county or state aid."

In the case of several hospitals receiving state appropriations, it is found that the hospital executives are pursuing a policy prescribed by their boards of directors, trustees or managers which is apparently directly at variance with the above quoted regulation. The admitting authorities of other hospitals say that the hospital conforms to this regulation. Certain members of the board of directors, trustees or managers, however, understand the hospital does not admit such cases.

Members of the governing boards of hospitals receiving this letter are requested to make a personal investigation of this matter, so far as it affects their particular hospital. This having been done, this department desires to be informed, officially, by the president or chairman of the board, as to the board's interpretation of this Health Department regulation as applied to his particular hospital. Will persons suffering from venereal diseases be admitted? If so, upon what terms or conditions?

State Board of Charities and Corrections,
(Signed) JAMES F. BAGLEY,
Secretary.

## THE ROUTINE WASSERMANN

In Public Health Reports for December 12, 1919, the question of routine Wassermann is discussed from the standpoint of collecting accurate statistics in regard to the presence of syphilis. Accurate statistics are important in the advancement of venereal disease control. It is stated that the making of routine Wassermann reactions upon patients admitted to general hospitals is a practical way of obtaining authentic information, and that hospitals are justified, because of the importance of gathering data, in making Wassermann tests a routine procedure unless there be some specific contra-indication. The report quotes the following suggestion in regard to venereal control measures in England from an article in the *Lancet* (London), by Dr. E. T. Burke, Ch.B., who advocates what he terms a "venereal offensive":

"To estimate the strength of the enemy is a necessary preliminary to an assault. The more accurate the estimate, the brighter are the prospects of success. One valuable measure would be the performance of a Wassermann on every patient admitted to hospital.

"At the present day, on account of the prevalence of syphilis, this is an essential routine. It should be as invariable a rule that a Wassermann test should be done as that the urine should be examined. Not the least valuable effect of this would be that the results would furnish us with a more accurate index as to the prevalence of the disease. Were it continued for a period of years, it would indicate whether or not any progress was being made toward eradicating syphilis from the community. The first effect produced where this routine has been adopted has been to cause a feeling of astonishment at the large percentage of positive results. An examination of figures from (a few) American hospitals shows that on an average 19 per cent of patients admitted, not apparently suffering from syphilis, give a positive result. We can not hope that our experience in England would be in any way different. We would at once discover an immense hospital population suffering from undiagnosed, untreated, and unsuspected syphilis. It is they who recruit the ranks of locomotor ataxia, aneurysm, and general paralysis of the insane; they form the 60,000 annual victims.

"It is more important to do a Wassermann on a patient admitted for a fractured femur than on one suffering from lightning pains and whose knee jerks are gone. As a diagnostic aid or as an indication for treatment it is, in the latter case, practically a waste of time. If in the former case the result is positive, antisyphilitic treatment would have a twofold effect. It would hasten the repair of the fracture, and would, in addition, greatly limit the liability of the patient to be readmitted some years later suffering from the quaternary stage of syphilis. A great use of the Wassermann is to be found in its application to cases where syphilis is unthought of.

"The laboratories for the performance of the test are in practically every hospital. New ones are springing up all over the country Competent workers are being trained. Here, then, we have ready everything essential to making a practical attack upon communal syphilis. When the routine Wassermann is done upon every hospital patient a real and great step will have been taken toward dealing with what is undoubtedly the largest and most vital problem in public health work today."

In response to a recent letter sent out by the Medical Department of the American Social Hygiene Association to a number of physicians, among other questions—"Should a routine Wassermann be done on all admissions to hospital?"—opinion is unanimous that it should be done. There are exceptions, of course, to any such generalized statement, such as emergency cases and particularly cases where peculiar contra-indication exists. It must be taken into consideration that the doing of a routine Wassermann will help to prevent accidental infections within the hospital. Moreover, in order that we do not find syphilis where it does not exist, the fallibility of the Wassermann must be recognized.

## BASE HOSPITALS TO REMAIN INTACT

In accordance with the wishes of the military authorities and as part of the peace program of the American Red Cross, base hospitals organized by the Red Cross for the army, which saw war service, will be held intact against future emergencies. War may never again visit this county, it is true, but there are the great disasters of peace—floods, earthquakes, epidemics—which might require immediate facilities, such as could be supplied only by a carefully organized and equipped system of base hospitals, which the Red Cross has as a legacy from its war experience.

These fifty base hospitals are located at important points through the country, and their personnel is recruited from the staffs of the hospitals in their vicinity. As a result of their war service, the doctors and nurses are incomparably well fitted to undertake such emergency tasks, and virtually, in all cases are being kept enrolled for duty when needed.

The army is cooperating with the Red Cross by providing each base hospital with a unit of equipment in accordance with military standards, which is stored in a government storehouse as near as possible to the city in which the base hospital is situated. Red Cross chapters, also, are assisting in the reorganization of the base hospitals for peace time, and will cooperate when base hospitals may be called for emergency service.

# PROGRESS IN EQIPMENT AND OPERATION

*Conducted by* FRANK E. CHAPMAN
Superintendent, Mount Sinai Hospital, Cleveland, Ohio

## Foreword

The establishment of this new department in the pages of THE MODERN HOSPITAL is primarily for the purpose of furnishing a vehicle for the interchange of ideas between administrators of hospitals.

There are a great many new and a great many old procedures in effect in various institutions which would be of inestimable value to administrators in other parts of the country in solving their problems.

The editor of the department can only correlate this information. It is a physical impossibility for him to furnish a sufficient amount of new material, and I want to take this opportunity, at the beginning, of soliciting from the hospital field as a whole, all of the suggestions and ideas available, with the sole thought in mind of making the department of value to the hospital field in general.

From manufacturers and vendors of hospital commodities I want to welcome criticisms, suggestions, and comments, assuring them it is the desire of the department to place before the hospitals improved methods of construction and operation.

The success of the department lies very largely in the hands of those who will and can assist in the furnishing of material for its use. EDITOR.

## Acknowledging Mistakes

By ASA S. BACON, Superintendent, Presbyterian Hospital, Chicago.

Elbert Hubbard once told the following story:

There is a man who has a farm near mine, on the outskirts of the village of East Aurora. On this farm is a flock of Southdown sheep, quite the finest bunch you ever saw. One day the man and his foreman decided that the sheep should be "dipped." The next day the foreman ordered one of his helpers to prepare the mixture. The sheep were dipped, twenty of them—and behold the effect! The wool came off in patches. The poor things were scalded, scorched and blistered. The helper had used carbolic acid diluted one-half, when it should have been used as one to one hundred. Of course, the foreman was to blame—he should have prepared the "dip" himself. But after the damage was done, the average man would have sat down and written a letter to the owner saying, "I hereby tender my resignation," etc., etc. This man didn't. He wrote his employer stating the plain facts, and asked that his pay be cut one-half, as punishment. The owner accepted the man's offer to work at the reduced wage, and never once after referred to the mishap. The foreman went to work nursing those injured sheep. He looked after them night and day as a mother does her children. At the end of the year the owner sent the foreman a check for the difference in wages. The man had made good!

There is a wonderful lesson for hospital superintendents, as well as employees, in this story. We all make mistakes, but it takes a mighty good man to acknowledge them, as this foreman did. The average employee can make good in spite of blunders, providing he will go to his employer and make a clean breast of them, and the wise employer will listen patiently to the employee, and give him advice, transferring him to other work if necessary, instead of firing him, as many do. Your hospital is a humanitarian institution and your employees are as deserving of humanitarian treatment as your patients.

## Pure Water Supplies for Hospitals

That the subject of pure water supply for communities, industries, and institutions, is being given more careful consideration is evidenced by the organization of the Associated Manufacturers of Water Purifying Equipment.

Born almost out of necessity while the recent war was in progress, the Associated Manufacturers of Water Purifying Equipment has now become a permanent organization. Although formed primarily for the purpose of getting the priority committtee to enable members of the Association to obtain sufficient supplies for the operation of their plants, there were reasons for the organization which did not disappear with the close of the war. Consequently, at a meeting held in New York in March, 1919, it was voted to continue the Association.

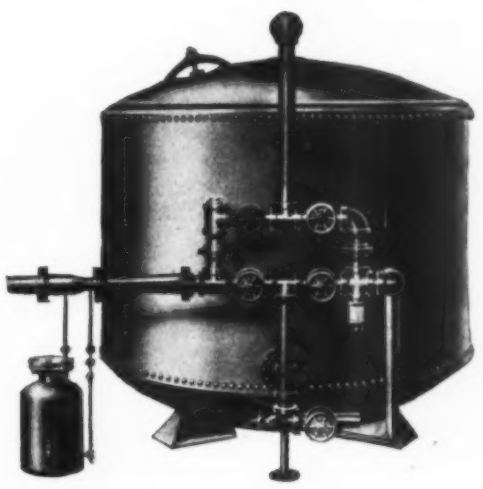


Fig. 1. A rapid pressure filter consisting of a closed cylindrical shell of iron or steel which contains a layer of silica sand, superimposed on gravel graded so that the voids in the gravel are smaller than the grains comprising the filtering sand.

Besides establishing friendly relations and cooperation among the members, its work will consist largely of stand-

ardization—such as standardization of equipment sizes, of guarantees to customers, and of terms of sale.

It will be the endeavor of the Association to have architects and engineers specify filters in such a manner that all manufacturing companies figuring on the specifications will estimate on filters of the same diameter. This can readily be accomplished by a specification by architects and engineers of what the rate of filtration should be. Benefits from the standardization and cooperation effected by the Association will naturally be realized by ultimate purchasers and users.

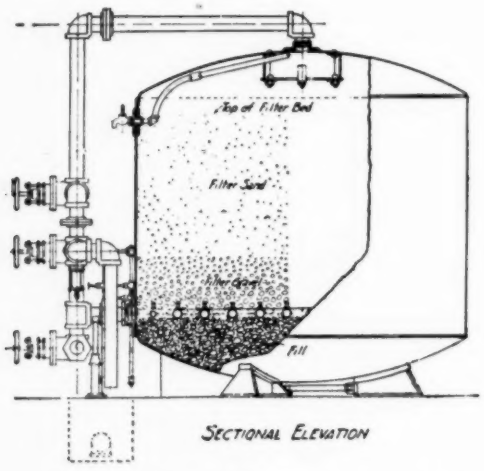



Fig. 2. Sectional elevation in a rapid pressure filter.

This is a subject that is especially interesting to hospitals. Hospital administrators should take every means to know that the supply of water for their institution is pure, and to install such equipment as will insure a proper water supply.

Eligibility for membership in the Association is restricted to individuals, firms, and corporations regularly engaged in the manufacture and sale of apparatus or equipment for the purification, rectification, or sterilization of water.

## A Desirable Type of Filter

There are various types of filters. Attention at this time is called to one of them (Fig. 2). This filter embodies the best principles of the rapid sand or mechanical filter type, which years of experimentation and actual use have proven the most successful in rendering water safe and suitable for industrial and home purposes. The process of filtration involves the passage of water through a bed of sand and gravel of special character and proper thickness, which has the effect of removing materials in suspension. With the aid of a coagulating agent, it removes impurities in water at a high rate of speed. It furnishes water perfectly adapted to the use of such industries as packing houses, starch, sugar, and glass works, distilleries and bottling works, paper and strawboard mills, and other industries where it is essential that water be clean. It also furnishes water adapted to the use of hotels, hospitals, office buildings, and swimming pools.

The filter is built in three styles and twelve sizes, its rate of filtration varying from ninety gallons an hour in the smallest, to nine thousand an hour, in the largest. Due to its simplified construction and principle of design, operation is an easy matter.

## Rules About the Radiator

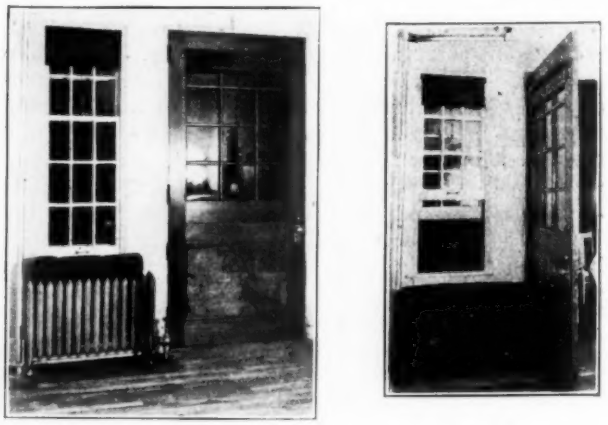
DR. DAVID A. STEWART, Medical Superintendent, Manitoba Sanatorium, Ninette, Man.

In all hospitals, and most of all, I think, in sanatoriums, there is a very great waste of heat. About heat which is used and rightly used, even if the bills are high, there can be no regret, but about heat wasted, benefiting no one, or even harming instead of helping, there certainly should be regret.

I have found in patients and members of staff (nurses included) ideas about steam heating so very inadequate that I have made a practice of giving early each winter some definite instruction—a sort of lecture on the anatomy and physiology of the system, on radiator illnesses, their causes, symptoms, and cure. Such a talk, here put on paper, may be of some use to others.

The "Tea Cosy" radiator cover referred to, of which illustrations are given, was devised to suit the peculiar conditions of a Northern winter and has been in use in the Manitoba Sanatorium for two or three years. We have found it a most valuable piece of equipment. Made up with an outer covering of duck of suitable shade, it looks quite as well as the radiator it covers, and can even be brought into the room color scheme. It is made of a shape and size to fit a particular radiator, large enough to drop to the floor, back and front, and take in the valve as well as the radiator itself. The padding we have used is ordinary cotton-batting and newspapers, with an inner lining of cheap material; the covers are made up very cheaply.

While most of our patients spend the day and usually the night on balconies, using their rooms chiefly as dressing rooms, very often, especially in the infirmary, a patient has to have this routine modified, and have the essentials of outdoor conditions while remaining indoors. To try to give these conditions in a zero atmosphere, with door and window opening, will create radiator difficulties. If heat is left on, there is very great waste and the room is scarcely cool enough; if left off, the radiator will freeze up and cause endless trouble; if the radiator is not frozen, but simply chilled and discouraged, it will sulk and refuse to work properly all day, or for many a day. We settle the problem by opening door and window wide, covering the radiator with our non-conducting, "tea cosy" radiator cover, and leaving the heat on. The room is cool but no heat is wasted. When morning comes, and the room, which has been practically a cold, open-air balcony for the night, should become a ward again, window



The adjustable "Tea-Cosy" radiator cover. At the left the cover is shown when not in use. The right-hand picture shows cover in use while window and door are open. The cover prevents chilling of the radiator.

and door are closed; the radiator cover is removed and the radiator, already sizzling hot, soon warms the room sufficiently to permit of any nursing procedure. The advantage of starting with a hot radiator instead of a cold one when a room is to be warmed is very considerable. The economy in steam production and radiator repairs, by intelligent use of the radiator cover, is remarkable.

## Electrically Heated Portable Steam Tables

Mercy Hospital, Chicago, has just installed five electrically heated portable steam tables that no doubt will be of great value in the handling of food, and should be watched with interest by hospital superintendents. Following is a photograph.

Portable steam table, electrically heated.

All food containers, as well as the coffee urn lining, are of burnished aluminum. The dimensions are:

Two meat panels, 11x9x2 inches.
Two vegetable inserts, 11 quarts each.
One potato insert, 11 quarts.
One gravy insert, 3 quarts.
One soup insert, 11 quarts.
One coffee urn, 3 gallons.

The top of table is constructed of burnished nickel silver. In size it is 4 feet 9 inches long, 2 feet 2 inches wide, and 36 inches high

The meat panels are fitted with revolving covers. All other inserts have clamp-on lids of aluminum. The table is supplied with 6-inch maple carving board.

The framework is constructed of 1¼-inch tubing, with shelf under pan for transporting breads, salads, etc.

The tables are fitted with 10-inch self-steering wheels equipped with demountable rubber tires. The entire truck is enameled white, with nickel fittings.

All inserts have round corners, easily cleaned—the last word in sanitary construction.

The inserts, heating elements, steam pan are all removable.

## Fuel Saving by Furnace Attention

By ASA S. BACON, Superintendent, Presbyterian Hospital, Chicago.

While the price of coal is working a hardship on the institutions throughout the country, a great deal of literature is being written on the subject, most of which affects the large plants and is not applicable to the small institutions. However, suggestions that will be found valuable to either a small or large institution are based on the fact that when a stack smokes there is waste, and attention to the firing should be given at once. A damper installed in the stack is a great help and a saver of fuel, if properly operated. All cracks in the front of the furnace should be sealed up, and warped doors should be replaced. The brick work should be gone over carefully and all cracks filled with fire clay and asbestos. A good way to find leaks is to hold a tallow candle near the wall; you will be surprised to see how the suction will draw the flame. After this is done, cover the brick work with leak-proof black elastic cement. A mason's trowel should be used and a thickness of about 3/16 inch should be put on. One hospital is saving about forty tons of coal a month since its furnace walls were made tight, as above described, and it no longer has smoke.

## NEW HOSPITAL LABORATORY IN POLAND

Warsaw, Poland, has a new medical laboratory, recently installed by the American Red Cross. It is the finest in Poland, and one of the most complete and up-to-date in the world. The equipment, which is new throughout, was transported across the Atlantic and over half of Europe. It is complete from the simplest phial to the largest and most expensive instruments, including a complete microscope.

The unloading and unpacking of the large shipments of laboratory material was not accomplished without difficulty. At first refugees were employed, but they were found in many cases to be so physically weak from prolonged underfeeding that the Red Cross doctors themselves finally rolled up their sleeves and helped to unload the heavy freight.

No gift of the American people to suffering Poland is more valuable than this great hospital laboratory, which is the eighth laboratory opened by the Red Cross. In all these laboratories, American chemical stains are used instead of the German chemicals with which it used to be thought that no other product could compete. American peptone is likewise used exclusively in fermentation processes, replacing the German, formerly the world standard. The services of these laboratories are greatly adding to the efficiency of the fight being made in Poland against the spread of typhus and cholera, both of which are still dangerously prevalent. The new laboratory, under the direction of Major Bruce Mohler, of Fremont, Ohio, is in charge of Dr. Placida Gardner of Los Angeles, Cal., with Dr. Gladys Vaughan of Wolfville, Nova Scotia, as chief bacteriologist.

## SURGICAL RESEARCH DEPARTMENT URGED FOR EVERY HOSPITAL

The establishment of a surgical research department in every hospital has been advocated by Jasper Halpenny in the Canadian Medical Association Journal. The chief value in a department of this type would be that it would tend to develop the student attitude of mind—a progressive groping for new light—and would prevent the practice of surgery from becoming routine and stationary. "Standardizing" in surgery means "fossilizing." The research department would lead surgeons not only to discover increasing numbers of new facts, but also to be more assiduous seekers for scientific truth.

Patient: This fish isn't as good as we had last Friday.
Porter: It ought to be. It's the same fish.—*The Stethoscope.*

# QUERIES AND ANSWERS

## REFUSING TO TREAT VENEREAL DISEASES IN THE GENERAL HOSPITAL

To the Editor of THE MODERN HOSPITAL:

Are general hospitals that receive their support from the community in which they are located, justified in refusing to admit and treat venereal diseases? If not, why not?—HOSPITAL SUPERINTENDENT.

In answering this question, we must first endeavor to determine what is meant by the correspondent when he uses the word "general" as applied to hospitals. "General" hospitals, as the layman uses the term, would be expected to care for all types of sickness not requiring special facilities—diagnostic, therapeutic, or protective. They would be expected to accept both medical and surgical cases, as well as both communicable and non-communicable cases, and, therefore, they certainly should not evade the moral or medical duty of accepting a sick person whatever the diagnosis. There can be but one justification for this evasion, and that is the element of danger to other inmates of the hospital.

In discussing the question of communicability, it must be realized that syphilis and gonorrhea are not different in degree from pneumonia and typhoid. The hospital, therefore, is not justified in excluding the gonococcus and accepting the pneumococcus. Nor can a hospital maintain its exclusive policy on the ground that it is entitled to keep out the spirocheta pallida and accept the bacillus typhosis. Any general hospital, moreover, which raises subscriptions on the sympathy of the well for the sick and of the well-to-do for the poor, and makes the appeal for public support on a general basis of treating the sick, has no right to refuse to accept patients of one variety of illness any more than it has a right to refuse to accept patients of one class, color, or creed. General hospitals which receive appropriations from public funds either from the municipality or from the state, are of necessity bound to accept all cases applying for admission at the front door, which is the door through which the venereal patient should enter.

In the query of the correspondent, we take the word "support," to apply to voluntary contributions and not public funds. Hospitals wholly maintained by the state or the municipality have not the slightest possible excuse for refusing to receive and treat gonorrhea and syphilis and may be left out of the discussion. Hospitals that are on a *per diem* subsidy or have part of their budget met by the state or municipality form a group which, it would seem, should be forced to accept any case requiring hospital care. The receiving of patients with venereal diseases should, in other words, be made one of the conditions precedent to their receiving public appropriation.

Disregarding the question of proper policy or sound principle, there is no doubt that a large percentage of both medical and surgical cases, whatever the diagnosis—are in the hospital primarily or secondarily because of the gonococcus or the spirocheta pallida. This includes, of course, such conditions as cardiorenal disease, angina pectoris, abdominal inflammatory conditions, chronic arthritic cases, and an endless variety of nervous affections. Cases "are now in all hospitals which have not the imagination and honesty to refer the origin of the lesion to the past event when 'moral turpitude' was the contributory cause," says one writer on the subject. Were routine Wassermanns done on all admissions to the hospital, it would undoubtedly be discovered that, in spite of any policy of exclusion, the institution was caring for a reasonably high percentage of more or less active syphilis.

That beds are necessary for the best treatment of certain cases of syphilis practically all writers on the subject agree. Visceral syphilis certainly requires hospitalization in the majority of recognized cases. Patients in the primary and secondary stage, who at first were unable or unwilling to care for themselves, must have bed facilities. It is the opinion of many authorities that the average individual with syphilis is not as dangerous in the average hospital as the patient with typhoid. Consensus of opinion seems to be that a syphilis ward is desirable where the volume of business is great.

Relatively little hospital facility is required for gonorrhea with the present methods of treatment. Many writers recommend that the early treatment of gonorrhea should start with a period of absolute rest in bed. This is not entirely feasible and, at the present time, is not generally practiced. As a result of the lack of bed treatment, there are undoubtedly a few cases of epididymitis; and, considering all the causative factors of epididymitis, there exist a reasonable number that do require bed facilities. The other complications, such as arthritis, prostatic abscess, or stricture of marked degree, manage to get inside the hospital on one excuse or another. Some beds are therefore required. Unless the hospital is running a very large service no special ward need be maintained. Ordinary surgical care as required in pus cases is sufficient.

From the evidence at hand and the general impression gathered in reading a large amount of material, it would seem that the consensus of opinion is that the hospital is *not* justified in refusing to admit and treat venereal disease. If, however, the hospital chooses to take a positive stand and, in its appeal for support, specifically states that no money will be accepted from anyone who objects to exclusion from the hospital because of venereal disease, then and then only is it justified in refusing to accept a case. Certain hospitals have in their charters a specification that they will not accept cases of venereal diseases; certain hospitals have been endowed on the

definite understanding that venereal disease will not be treated within; others have had restrictions placed upon them by their financial backers to a degree that prohibits their having even out-patient departments for the treatment of gonorrhea and syphilis. Hospital with limitations of this character are not playing the game square with the supporting public when appealing for funds unless they make the statement in their appeal that, because of their peculiar organization, they cannot accept a case of gonorrhea or syphilis.

It is regretted by some that there are no laws compelling hospitals to deliver service in line with their appeal for support. In places where local agreements and rules are made for the pooling of subscriptions for welfare purposes, thus concentrating all money raising drives in one campaign, the committee in charge of such a drive ought to require that the hospitals and dispensaries which offer treatment facilities should make provision for gonorrhea and syphilis as a condition precedent to their coming in on the general drive.

Answering in this generalized way the question asked by our correspondent, we have indicated lines of thought rather than rendered a cut and dried decision. In discussing this matter one rather suggestive question has been asked, "Suppose a public spirited individual of the community makes a subscription of, let us say $2,000, to the support of the general hospital, assuming from the appeal for funds that the hospital was what "general" would indicate, and then he tries to have a primary case of syphilis requiring hospitalization admitted. Is he justified, upon the refusal of the hospital to admit the case, in suing for the return of his money on the ground that it was solicited under false pretenses?" This question warrants consideration. It may be tried some day if an enthusiast for the control of venereal diseases attempts to force the issue!

## OVERWORKED NURSES

To the Editor of THE MODERN HOSPITAL:

Will you kindly give us your opinion concerning the number of patients a pupil nurse should be able to care for. We have a training school of ninety nurses. On a floor of forty patients, ten in each of two wards and the rest in private rooms we have three, rarely four nurses to do all the work. The pupils also do the special cases as graduates are not called in. "It costs too much to hire help," say the trustees, so the nurses have to do all the sweeping and cleaning.

HEAD NURSE WITHOUT HELP.

Five nurses to forty patients should be the minimum; and when the nurses are compelled to do the sweeping and cleaning, this number is not sufficient. These pupil nurses should also be supervised by a graduate nurse who has had proper training in floor work.

Pupil nurses should not be called upon to do special work as graduates, except possibly during the last three months' of their training.

Nurses should not be called upon to do the maids' work in the hospital. A hospital that compels the nurses to do maids' work as well as sweeping and cleaning, will eventually lose out, for when parents find out that their daughters are being exploited in this way, they certainly will not let their girls take training in a school of this kind. This is not practiced in the Class "A" hospitals throughout the country.

To love truth for truth's sake is the principal part of human perfection in this world, and the seed-plot of all other virtues.—John Locke.

## OPERATING ROOM IN PRINCESS' BOUDOIR

In the sixty-bed hospital which the American Red Cross has equipped and put in operation in the former palace of Prince Mirko in Pedgoritza Montenegro, the operating room is the former princess' boudoir. The anesthetist's seat is a carved mahogany piano stool from the Prince's music room, and the instrument case is the Prince's *armoire* (chest of drawers). Two tables for dressing were made of packing boxes, scrubbed but unpainted, and the instrument stand is a rosewood wall table. Water heater and waste box are made of petrol tins, and when operations are performed at night an ordinary kerosene lamp furnishes the only light.

A few months ago there were neither doctors nor hospitals in Podgoritza. When the Red Cross came there, it found that the only livable house was the former palace of Prince Mirko, son of the ex-king Nicholas. It had been closed for several years, still partly furnished. By applying to the Serbian government, the Red Cross got permission to use it for a hospital. Iron cots without springs, left behind by the Austrian army, were the only beds obtainable. Tables were made of ordinary packing boxes which had once contained supplies shipped from Red Cross warehouses.

Although the house had been a prince's palace, there was no plumbing. Five-gallon gasoline cans were converted into tanks which supplied the makeshift bathroom. Ten women were employed filling these tanks until a primitive sort of piping could be put in. The water is now pumped by hand from the river.

The conservatory, looking out on the rose garden, was made into a tuberculosis ward. Springless iron beds and packing boxes furnished it. In warm weather, all who are not bed patients sit out in the sunshine of the garden in steamer chairs contrived from packing box wood and sacking. "We had the palace," says Miss Lena Johnson, head nurse. "The rest we had to invent. But it works. That's all we care." The hospital will operate throughout the winter.

## A NOVEL AMBULANCE IN TIRANA

Down to the Red Cross hospital in Tirana, ten miles over rough mountain paths, came four men bearing what looked from a distance like some sort of a sedan chair, or an oriental palanquin of curious shape. As they came nearer the strange conveyance resolved itself into a huge brass kettle, swung between long poles, in which on a bed of leaves and hay sat a sick woman. The men sat down the kettle with extraordinary care and tenderness. She was very sick—would the American doctor see her? But alas, there was little the American doctor could do. She was too far gone in tuberculosis. He could only advise preventive measures for those who surrounded her, and prescribe a palliative for her cough.

It has been slow work gaining the confidence of these mountaineers who have suffered so much from disease and privation during the war. Medical attention, except in the cities, is almost unknown. There are now only four native physicians in the whole country. But the Red Cross has established hospitals and dispensaries, has fed the people and given them medical treatment, and as a result the conditions are greatly improved, although there is much still to do.

Art little? Do thy little well, and for thy comfort know great men can do their greatest work no better than just so.—Goethe.

# BOOK REVIEWS AND CURRENT HOSPITAL LITERATURE

*[Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.]*

* * * *

**HENRY MILLS HURD.** By Thomas Stephen Cullen. A biographical sketch of Henry M. Hurd, A.M., M.D., "probably the best known hospital superintendent in the United States, an expert on hospital organization and management, professor of psychiatry, author, and editor" by one of his professional associates written at the request of the President of the Board of Trustees of the Johns Hopkins Hospital and one of the trustees, Mr. George Keen McGaw.*

Dr. Hurd was born May 3, 1843, at Union City, Brach County, Michigan. His parents, Theodore C. and Ellen E. (Hammond), came originally from Connecticut to Michigan in 1834. The father, a pioneer physician, died at the age of 39, leaving a wife and three little boys. His mother remarried in 1848, and in 1854 went to Galesburg, Ill. In 1858 he entered Knox College, where he spent two years. He taught for a year, and in 1861 entered the University of Michigan. He attended lectures at the Rush Medical College, Chicago, and at the University of Michigan, graduating from the department of medicine and surgery of this university in 1866. The following year he spent in New York in study and hospital work, then moved to Chicago, where he engaged in dispensary and general practice for two years. In May, 1870, he was appointed medical officer in the State Hospital for the Insane at Kalamazoo, Mich. In 1878 he was made assistant superintendent, but resigned to take charge of the Eastern Michigan Hospital for the Insane at Pontiac, where he remained until 1889.

In 1861 he visited Europe for travel and for certain investigations, which were later published in connection with the biennial report of the Eastern Michigan Asylum, 1882. June, 1889, he was made director of the Johns Hopkins Hospital, in which capacity he served until 1911, when he resigned and became secretary of the Board of Trustees of the Johns Hopkins Hospital.

Dr. Hurd has published various articles, reports and papers relating to the care of the insane, hospital management, and psychiatry. Among important articles are; "A Plea for Systematic, Therapeutical, Clinical and Statistical Study," 1881, a criticism of the published reports of institutions; "The Hereditary Influence of Alcoholic Indulgence upon the Production of Insanity," 1883; and 'Future Provisions for the Insane in Michigan," 1883, a criticism of false economy applied to the care of the insane.

Through the publication of his annual reports of the Johns Hopkins Hospital, Dr. Hurd scheduled events of importance, suggested changes, proffered recommendations, and chronicled activities of the hospital. The first report of 1899 discusses the organization, equipment, and personnel of the hospital. Particular attention is given to the opening of the Nurses' Training School, October, 1889. The annual reports are divided into three groups—1890-1897, 1898-1905, 1905-1911. During the first period, the opening of the Johns Hopkins Medical School in 1893, the addition of various wards and gifts, the growth and influence of the Nurses' Training School, and the opening of the Colored Orphan Asylum in 1895 are prominent items. During the second period, the Baltimore fire, in 1903, left the hospital finances in a precarious state, but a gift of $500,000 from Mr. John D. Rockefeller enabled the hospital to "continue its works of charity, medical education, medical research, and the training of nurses."

Within the hospital Dr. Hurd established various publications and clubs among the members of the hospital and dispensary staff. A monthly known as the Johns Hopkins Bulletin was established "to contain announcements, reports of societies, and minor medical contributions." A hospital medical society was established, with bimonthly meetings at which papers were read, patients exhibited, pathological specimens presented, and the results of original investigations in the clinical, pathological, and hygienic laboratories were reported. A Journal Club was organized to review current literature, and in November, 1890, the Historical Club, to study medicine in its historical aspects.

Papers and addresses published by Dr. Hurd, while he was superintendent, are listed. With Dr. John S. Billings, Dr. Hurd assumed the expense of publishing certain papers devoted to the hospital care of the sick, the training of nurses, dispensary and first aid to the injured, read at the section of the International Congress of Charities, Corrections and Philanthropy held at Chicago, June 12 to 17, 1893. In 1895 Dr. Billings and Dr. Hurd published a volume of 43 pages, "Suggestions to Hospital and Asylum Visitors." Perhaps his most important work was his organization and participation in the history of "The Institutional Care of the Insane in the United States and Canada," which is "one of the few works in the English language in which the history of a separate branch of medicine has been exhaustively treated."

Dr. Hurd was one of the editors of the *American Journal of Insanity* since 1897 and of THE MODERN HOSPITAL since 1913. He was a member of the Association of American Physicians, of the American Anthropological Association, and of the American Public Health Association; president in 1896 of the American Academy of Medicine; secretary, 1892-1897, president, 1898-1899, and editor of three volumes of the proceedings of the American Medico-Psychological Association; and president of the American Hospital Association in 1912.

*The Johns Hopkins Press, Baltimore, Md., 1920.

Mr. George Keen McGaw, his friend and admirer, has left funds for the erection of the Henry M. Hurd library as a mark of appreciation and esteem. He was particularly anxious that Dr. Hurd should see and enjoy the library bearing his name. Dr. Hurd is at present engaged in writing a history of the Johns Hopkins Hospital.

The last chapter, "Some Random Recollections," was written by Dr. Hurd at the request of his friends, and is a delightful description of the experiences of a youthful pioneer, and a brief sketch of his many activities.

A bibliography of the publications and works of Dr. Hurd is appended, with reference to the date of appearance, and the periodical or conference in which each appeared.

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**INDUSTRIAL MEDICINE AND SURGERY.** By Harry E. Mock, M.D., F.A.C.S., Assistant Professor of Industrial Medicine and Surgery at Rush Medical College. Octavo, 846 pp., 210 illustrations.*

Dr. Mock's book is in a way a pioneer in the field of industrial medicine. It is divided into six parts: (1) Industrial Health Service; (2) Prevention; (3) Industrial Medicine; (4) Industrial Surgery; (5) Compensation Insurance, Medico-Legal Phases; and (6) Reconstruction. The basis upon which the material is distributed is not always clear and in reading the book one feels that a series of detached articles with a common subject have been brought together. The book is, however, the result of years of observation and study and as such demands the most careful consideration.

A great variety of the problems and difficulties of the industrial practitioner are touched upon. Under the heading of industrial health service are treated the personnel, the equipment and the activities of the medical department. The construction of the office and dispensary receive detailed treatment. Dr. Mock points out that the employment of part-time physicians has some very distinctive advantages. Under such a system several men well grounded in general work can relieve each other, yet may each have the opportunity to use his special knowledge, as the occasion arises. In this way all are free part of the day to develop their special lines of work, and incidentally, they are becoming more valuable to the concern because of this development. The salaries paid these part-time physicians are good. Although the concern could not employ them for full time without an outlay that would make it prohibitive, their combined salaries do not exceed what the concern would pay for one mediocre physician giving his full time to the work.

A special chapter on the nurse in industry is contributed by Miss Mae Middleton, most of which is devoted to illustrative cases showing the importance of this activity. Dr. Mock feels that social welfare work among the families of the employed, is justifiable on economic rather than humanitarian grounds. On the same principle the medical services and the mechanical safety services should be under one head to assure proper coordination of their activities.

The problems of physical examination of applicants for employment, Dr. Mock feels, may be handled largely by tactful explanations to remove suspicions. The percentage of absolute rejections is small. The most important functions of the examinations are the fitting of men to jobs, the prevention of accidents due to partial incapacity and the opening of a medical record for the employee.

A chapter on women in industry reviews largely the experiences of the war in dealing with their problems of routine physical examination, the provision of facilities for resting and the general supervision of their health.

The tuberculous employee is considered from the hygienic, statistical, sanitary and the rehabilitation points of view.

The highest grade of surgical skill and knowledge is necessary to the industrial surgeon. The detailed explanation of different methods and technique brought out by Dr. Mock, amplified by his own experience, will make the book of great value. The immediate and free use of iodine is particularly emphasized as one of the most important points in industrial surgery. Orthopedics, especially the reeducation of crippled and disabled men, receives particular attention.

Workmen's compensation, health insurance and employees' mutual benefit associations are all discussed. In the problems of reconstruction there is a special chapter devoted to human conservation and the reclamation of the disabled.

A very complete bibliography covering the field of industrial medicine and surgery since 1916 is appended.

*W. B. Saunders Company, Philadelphia, 1919, $10.

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**THE NARCOTIC DRUG PROBLEM.** By Earnest S. Bishop, M.D., F.A.C.P.†

Whatever differences of opinion may exist as to the personality of the drug addict and the causes leading up to his "drug addiction disease," as the author calls it, the readers of Dr. Bishop's book can not deny that the problem as presented and the solution as expressed by him are in accordance with modern medical opinion of the disease. The conception, as the author states, properly begins with the individual drug patient. The "group" handling of these cases which he believes is a reprehensible practice and accountable to a large degree for the failure of the medical profession to institute proper methods of treatment, is graphically described.

In the tenth chapter there is apparent a strong appeal to the public and to the physician to consider primarily the individual case and an admonition to direct legislation and remedial measures consistent with the peculiarities of the patient. In the author's opinion the proper solution of the proposition must center on the case *per se*.

There can be no question that, as the author states, the drug addict is a sick man and that his actual need for the drug or, "craving," as it is properly termed, is in direct relation to a feeling of incapacity experienced by the patient. The theory of drug addiction disease as an antidotal toxic substance proposed by the author may not be entirely acceptable; however, the acceptance or rejection of this theory in no way detracts from the value of the book which must be considered a much needed contribution to the meager library on drug inebriety and drug theraphy. The author's description of the point of view of the drug addict is interesting, and to one familiar with drug cases is a true presentation of the subject. Unquestionably, the fear of the development of abstinence symptoms, and the patient's lack of faith in the many methods of treatment which he may have tried, account to a considerable extent for the lack of coöperation of the patient, frequently observed.

Dr. Bishop deplores the widespread opinion that chronic opium addiction is a morbid habit denoting mental, physical, and moral degeneration. He believes that the majority of the narcotic addicts are mentally and morally of the same average equipment as other people, a statement which may be questioned by those who have made psycho-

†Macmillan Company, New York, 1920, $1.50.

metric examination of a number of cases of different social status.

The chapter on methods of treatment should be read by every physician. The fallacies of any specific treatment are emphasized, and the essential adjunct to any method of treatment, viz., education, is given considerable prominence in the concluding chapter.

Chapter VIII,—"Laws and Their Relation to Narcotic Drugs,"—is an appeal to the medical profession for wise interpretation with an understanding of the true conditions of the disease.

The author believes that the present law was wisely enacted and that, taken as a whole, if wisely administered, it should accomplish its purpose.

In the final chapter of the book there is a strong appeal for general education which should go hand in hand with any plan advanced for betterment. Attention is particularly called to public clinics under competent management. The concluding paragraphs of the book, which are quoted, express the author's ideas as to the proper steps necessary to bring the disease under control:

"In the past the problem of control of addiction has been what shall be done with or what shall be done to the narcotic addict to make him stop using drugs? It is now gradually coming to be realized that the true problem is, what can be done for the narcotic addict to relieve him of the physical necessity of using drugs, and what can be done to so educate the public as to the facts of addiction, so that this disease will claim as few victims as possible?

"In this change of attitude lies the hope for the future. Some narcotic addicts will have to be rather severely dealt with. They are the inherently irresponsible, vicious, or defective. They demand care and restraint irrespective of their addiction. The mass of addicts, however, need someting done for them. They are clinical problems of internal medicine, victims of a definite disease, characteristic in its symptomatology, reactions and phenomena, a disease which will before long come to be known as clinically and therapeutically controllable and arrestable."

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**A TEXTBOOK OF CHEMISTRY FOR NURSES.** By Fredus N. Peters, A.M., Ph.D., Author of "Experimental Chemistry," "Laboratory Experiments," "Modern Chemistry," etc.; formerly professor of chemistry and director of laboratories, Kansas City College of Pharmacy; professor organic chemistry, Hahnemann Medical College; director of laboratories and professor of chemistry and metallurgy, Kansas City Dental College; head of science department, Kansas City Central High School.[1]

There is only one way to teach chemistry properly, whether to nurses or any other type of students, and that is by beginning systematically with inorganic chemistry and supplementing this by a thorough laboratory course. After the fundamentals of the science have been assimilated, the more intricate subject of organic chemistry may be tackled.

The author has attempted the difficult task of presenting, in one compact volume the essentials of both organic and inorganic chemistry in such a way that the student might get the maximum in the small space of time allotted to this subject in the nurses' curriculum.

The book is very practical and popularly written; many examples of the application of chemistry in everyday life are inserted in the text. On the whole, this little manual is well suited for the purpose for which it is intended. The teacher can easily supplement the course by a few experiments here and there to illustrate the salient points.

1. C. V. Mosby Co., St. Louis, 1919, $1.75.

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**NURSING IN DISEASES OF CHILDREN.** By Carl G. Leo-Wolf, M.D., chief of the clinic for sick babies and children for the health department of the City of Buffalo, N. Y.; instructor in pediatrics, University of Buffalo, Medical Department; author of "The Child in Health and Illness."[2]

After a careful reading of Dr. Leo-Wolf's little volume on nursing in diseases of children, one feels that it might well become a very constant companion for the nurse. It would certainly be of distinct value to many physicians as well. The book is a simple, straightforward conversation between a man and his associate workers, who are also his friends; a man who, while he would demand the utmost obedience from his nurses, would be inclined always to give them full credit for the good results for which they have been responsible.

The next thing which strikes one is the very great care that the author has taken to explain the "little things" which are so seldom mentioned in the textbooks. These are the details which the nurse often fails to have at her fingers' ends but which she often hesitates to ask of the physician because he sometimes scoffs more or less at the things which she wishes to discuss as important. It is the big man who recognizes the value of the so-called nagging details and, also, that especially with women, both nurses and mothers, there is often a real ability to note detail of all kinds. Many training schools cannot give the nurse sufficient individual training to prepare her for all the exigencies of private nursing, and too often she blunders because no one has impressed the importance of simple things upon her. This Dr. Leo-Wolf does to a very noticeable degree, and his frequent admonition to the nurse "to put yourself in the patient's position" is certainly very pertinent. If all doctors and nurses did that more frequently, how different would be the history of the patient's experience.

The first two chapters of the book, the introduction and that headed "Physiology and General Considerations," give a good working basis, but with no superfluities. The third chapter, that on clothing, is very different from the matter before and after, and is the poorest one in the book. It is too short, too one-sided in opinion, and would not be practical generally, because it advocates unqualifiedly for the layette a number of things which many good pediatrists do not use. The chapter on infant feeding is a joy because it sets forth a positive plan, at the same time warning the nurse not to feed babies herself unless absolutely necessary, but still places in her hands a rational procedure in case she should be left, in an emergency, alone. The chapter on the examination of children is full of practical hints for both doctor and nurse and, again, there is much of practical value in the discussion of the nursing of sick children and infections.

Of course, the nurse is always the victim of the fact that no two doctors take care of their children in at all the same way, and one would naturally differ on occasion with Dr. Leo-Wolf; but there are very few textbooks where there is expressed as fair an opinion of the other man's point of view. Furthermore, the book is a relief because it does not have the mixture of physiology and anatomy, nursing and *materia medica* that one finds jumbled together in so many of the nursing textbooks.

2. C. V. Mosby Company, St. Louis, 1918.

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A fine quotation is a diamond on the finger of a man of wit, and a pebble in the hand of a fool.—Abbe Roux.

# FOREIGN CORRESPONDENCE

## REGISTRATION OF NURSES IN GREAT BRITAIN

From our London Correspondent

State registration of nurses is now an accomplished fact in this country. Three Nurse Registration Bills, Bill No. 2 providing for the registration of nurses for the sick under a General Nursing Council for England and Wales, the Nurses' Registration (Scotland) Bill establishing a General Nursing Council for Scotland, and a Nurses' Registration (Ireland) Bill establishing a General Nursing Council for the registration of nurses in Ireland, have all received the Royal Assent and become Acts of Parliament. Registration of nurses, therefore, is law in Great Britain and Ireland.

The registration of nurses is a matter to which attention should have been paid long ago, for, because there was no means of placing an absolutely distinctive mark on nurses who were really thoroughly trained and qualified for their work, the uniform was naturally abused a good deal. Some persons masqueraded in nurses' clothes, who were nursemaids. These did no particular harm, perhaps, except that they brought the garb into ridicule. Others wore the nurses' uniform for less worthy purposes and cast perhaps a certain amount of disrepute on a calling which has been sanctified by Florence Nightingale and by many other good women. However, all that is past and done with, and in the course of a few years will be regarded almost as ancient history. It may be said that the Act is retrospective and will shelter under its wing a large number of nurses who cannot show the hall-mark of a first class training. This state of affairs will continue for some time, and doubtless the official register will be flooded during the first few years with half trained or inadequately trained nurses.

### Business Aspect of Registration

It may be well to discuss briefly British nurse registration from the business aspect, that is, as it rests on the basis of the three Registration Bills, and in doing this, one cannot proceed more wisely than to refer to the articles of "Ierne" which have appeared in *"The Hospital"* from time to time. The writer of the said articles is an acute observer, thoroughly conversant with her subject, who surveys the question from a broad outlook. Although it must be allowed that there are cliques in the nursing profession, and, possibly, some nurses who seem to prefer the advancement of their own interests to the good of the profession and the health of the community, she does not appear to have any axe to grind. "Ierne" has pointed out that the Registration Act is not a concession to the nursing profession any more than the Medical Acts were to that of medicine. She, for it is to be presumed that "Ierne" is a woman, takes the stand that "the only nurses who can hope directly to derive substantial benefit from the measure are the 'birds of doubtful plumage,' those who cannot show the hall-mark of a first class training. It may happen that the letters 'R.N.' after their names will make them eligible for public appointments from which they have been hitherto debarred, but this remains to be seen." The Registration Act will not greatly help the fully trained nurse during the first ten years or so of its enforcement. Real merit and her certificate of training will constitute, as before the passage of the Act, her credentials. But after some years have gone by, and after the Act has been further amended, as it probably will be, the sheep will be separated from the goats and registration will signify what it should signify, an imprimatur of absolute competence. As the Bill stands now it merely provides for the enrolment of names on a list and leaves it to a General Nursing Council to define the standard of training and other essential matters.

### Council of England Constitution

The constitution of the Council for England and Wales is as follows:

"(1) The Council shall consist of twenty-five members.

"(2) On its first constitution the Council shall be composed of the following persons: two persons who shall not be registered medical practitioners, or nurses, or persons concerned with the regular direction or provision of the services of nurses, appointed by the Privy Council; two persons appointed by the Board of Education; five persons appointed by the Minister of Health, after consultation with persons and bodies having special knowledge and experience of training schools for nurses, of the work of matrons of hospitals, of general and special nursing services, and of general and special medical practices; sixteen persons, who are, or have been at some time, nurses actually engaged in rendering services in direct connection with the nursing of the sick, appointed by the Minister of Health after consultation with the Central Committee for the State Registration of Nurses, The College of Nursing, the Royal British Nurses' Association, and such other associations or organized bodies of nurses or matrons as represent to the Minister that they desire to be consulted in the matter. The Minister in making appointments under this provision shall have regard to the desirability of including in the Council persons having experience in the various forms of nursing.

"(3) The first members of the Council shall hold office for such term not less than two years, and not exceeding three years from the commencement of this Act, as the Minister of Health may determine.

"(4) After the expiration of the term of office of the first members of the Council, the Council shall be composed of nine persons appointed respectively by the Privy Council, the Board of Education, and the Minister of Health as aforesaid, and of sixteen persons, being persons registered as nurses under the Act, elected in accord-

ance with the prescribed scheme and in the prescribed manner by the persons so registered at the date of election.

"(5) Any members of the Council other than the first members shall hold office for a term of five years.

"(6) If the place of a member of the Council becomes vacant before the expiration of the term of office, whether by death, resignation or otherwise, the vacancy shall be filled by appointment by the body or persons by whom the member was appointed, or if the vacating member was an elected member, by the Council. The Council in co-opting a member under the foregoing provision, shall, so far as practicable, select a person, being a person registered as a nurse under this Act, who is representative of the same interests as those represented by the vacating member. Any person appointed or elected to fill a casual vacancy shall hold office only so long as the member in whose stead he is appointed or elected would have held office.

"(7) Any member ceasing to be a member of the Council shall be eligible for re-appointment or re-election.

"(8) The powers of the Council may be exercised notwithstanding any vacancy in their number."

The Parliament of Great Britain is compelled, or virtually compelled, when establishing any State register, to safeguard the interests of those already in practice. Consequently, a clause in the Bill has been inserted whereby nurses in practice are admitted to the Register during a period of two years subject to the approval of their claims by the General Nursing Council. Rules made by the Council will not come into operation until they have been approved by the Minister of Health and laid before Parliament. The register is to consist of a general and supplementary part, the latter to include male nurses, mental nurses, and nurses of sick children.

Any person who proves to the satisfaction of the Council that he or she has been registered either generally as a nurse for the sick, or as a nurse of some special class in any part of His Majesty's Dominions outside of The United Kingdom, being a part of those dominions to which this section applies, shall be entitled, on making an application in the prescribed manner and paying the fee, to be registered in a corresponding manner under this Act. This applies to Scotland and Ireland. Nurses registered in Scotland or Ireland may claim admission to the English Nurses' register provided that they reach a certain stipulated standard; with a view to securing a uniform standard of qualification in all parts of the United Kingdom, the English nursing Council shall before making any rules under this Act with respect to the conditions of admission to the register, consult with any Nursing Councils which are established by Parliament for Scotland and Ireland respectively.

### Success of Bill Rests With Council

As the *Lancet* (London), December 27, 1919, pertinently remarks: "It is quite evident that the question whether or not State Registration of nurses, as granted by the Bill, is to be a help to the nursing profession and to the public sick, will depend entirely upon the General Nursing Council, its wisdom and strength." The Council has to make definite rules for admission to the register, length of training, manner and quality of training, kind of examinations and other tests to gauge the fitness of the candidate. Indeed the entire future success of the Bill, and to a great extent, of the health of the country rests with the Council. Dr. Addison, the Minister of Health, believes that this Bill will placate the warring or jarring factions in the English nursing world, and it is to be hoped for the good of all concerned, that his faith will be justified.

The registration of dentists and nurses in England will come almost at the same time, as it is certain that a Dentists' Registration Act will become law very shortly. The trinity of medical men, dentist and nurse is essential to the successful carrying out of the Ministry of Health scheme for the regeneration, largely by preventive means, of health in Great Britain. To achieve this object it is as necessary that the nurse be highly skilled as that the doctor and dentist are thoroughly competent. In any event, whatever the outcome, the registration of nurses in Great Britain is obviously a step in the right direction. The registration of nurses and the registration of dentists are due to the Ministry of Health and are a part of the campaign being waged by its members in favor of the practice of preventive medicine on organized lines. The campaign may end in a State Medical Service, a State Nursing Service and a Dental Nursing Service, but if this is the result, and it proves for the good of the health of the community, the end will have justified the means. We shall see what we shall see.

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## FIRST AID

For nine months, she had religiously attended the ambulance class. And today there was something to try her skill on. A man had fallen down in the road and broken his leg. Joy of joys!

Scattering in all directions the crowd surrounding the sufferer, she flopped on her knees at his side. She snatched a walking stick from a man standing near and broke it into three pieces for a splint.

"She dragged a mackintosh from a woman's shoulder and cut it into strips for a bandage. When the poor chap on the pavement had been splinted and bandaged as well as she could do it, an ambulance was called and she took him to the hospital.

"This is beautifully done," said the doctor, as he unwound the bandages; "Who did it?"

Blushingly, she confessed to it.

"Splendidly done," said the doctor "But you have made one little mistake. You've bandaged the wrong leg."—*Pharmacal Advance.*

## LABOR

Let me but do my work from day to day
In field or forest, at deck or loom,
In the roaring market place or tranquil room;
Let me find it in my heart to say,
When vagrant wishes beckon me astray:
"This is my work, my blessings, not my doom;
Of all who live I am the only one by whom
This work can best be done in the right way."
—Henry Van Dyke.

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Good manners is the art of making those people easy with whom we converse.—Dean Swift.

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Nothing that is excellent can be wrought suddenly.—Jeremy Taylor.

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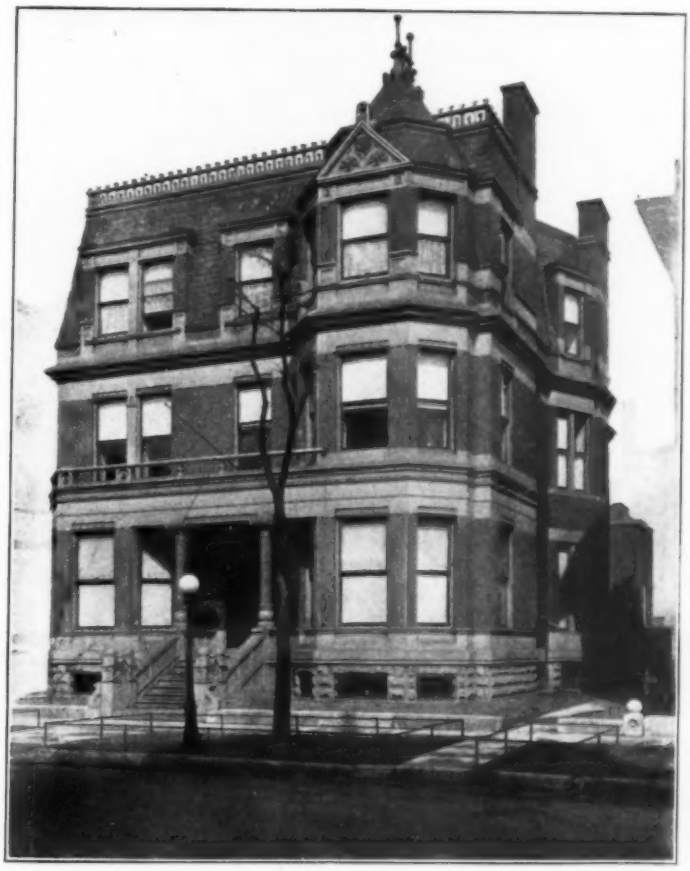
The tyranny of yesterday can be softened only by the lure of tomorrow or the grip of today.—Journal of Outdoor Life.

# A National Hospital Center



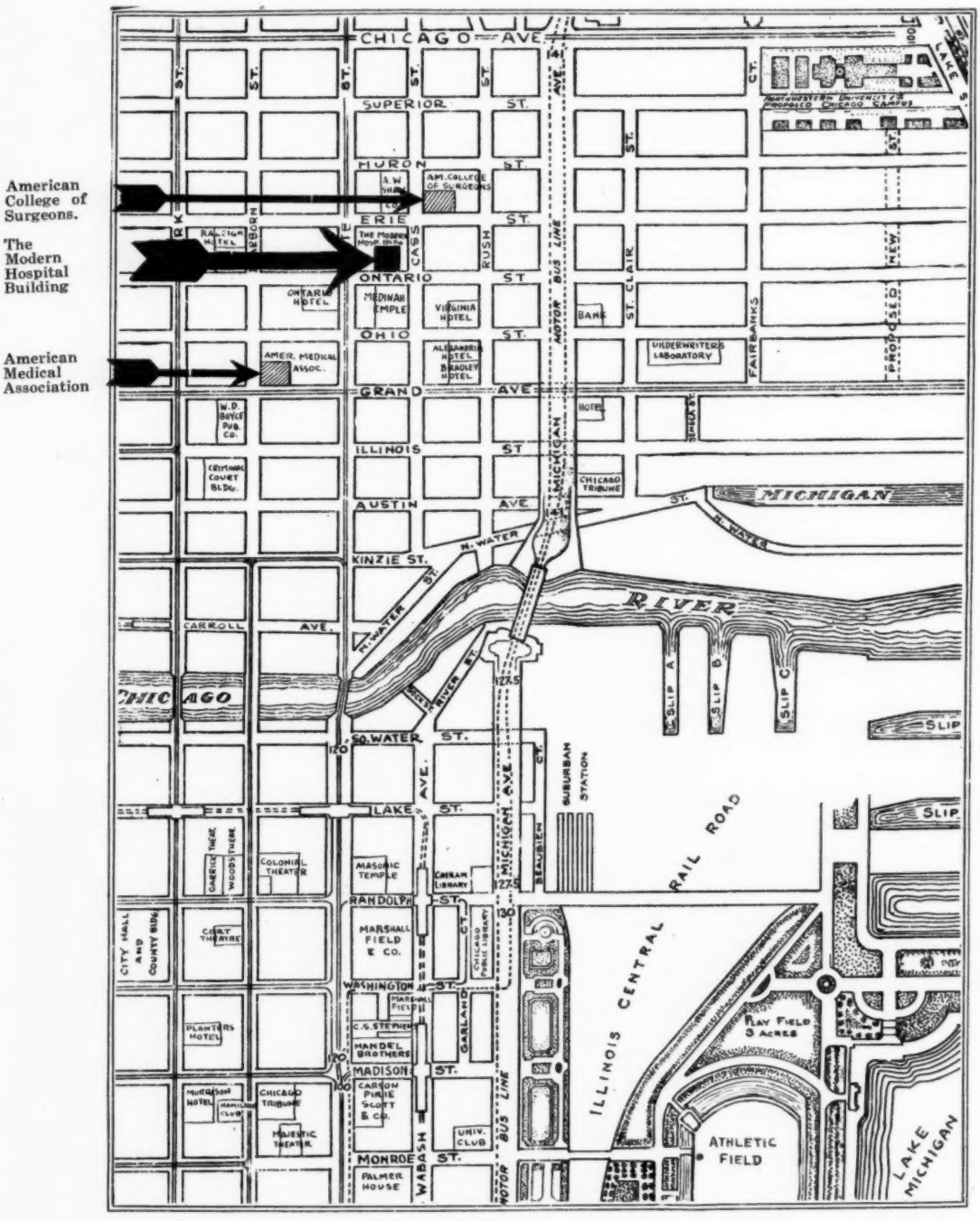
The Modern Hospital Building

THE MODERN HOSPITAL, having long since outgrown its former quarters because of the increasing service it is being called upon to render in the hospital field, has removed its offices to its own building at 22-24 East Ontario Street, which will hereafter be known as The Modern Hospital Building.

In establishing its headquarters in this building, The Modern Hospital is adding another to the growing group which is establishing Chicago's reputation both here and abroad as the center of medical and hospital organization and education in this country. Within a few blocks stands the building long occupied by the American Medical Association, while the new home of the American College of Surgeons is only a stone's throw away.

The Modern Hospital Building will be a veritable center of national hospital, health, and welfare activities. It will house not only the offices of The Modern Hospital, the Modern Hospital Year Book, and Modern Medicine, but also the national headquarters of the American Hospital Association and the National Catholic Welfare Council (Division of Social Action). What this will mean in the way of more expeditious interchange of thought and activity and greater ease and cooperation between the number of national organizations at work in the hospital and kindred fields can readily be seen. Other developments are pending which, when consummated, will greatly enhance this center to all who are interested in these fields of work.

# Map Showing Location of the New Hospital Center




The arrows indicate the close proximity of the Modern Hospital Building to the buildings of both the American College of Surgeons and the American Medical Association.
The map shows, also, the accessibility of these great factors in the medical and hospital field, to many other places of interest in Chicago. The Modern Hospital Building is within a half block of the State Street surface car line, and two block from bus line service operating over the important new Boulevard Link connecting all parts of Chicago.

Consult The Modern Hospital YEAR BOOK for catalog information.